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THERAPEUTIC USE OF HEROIN

HEARING
BEFORE THE
SUBCOMMITTEE ON
HEALTH AND THE ENVIRONMENT
OF THE
COMMITTEE ON
INTERSTATE AND FOREIGN COMMERCE
HOUSE OF REPRESENTATIVES

NINETY-SIXTH CONGRESS

SECOND SESSION

ON

H.R. 7334

A BILL TO AMEND THE CONTROLLED SUBSTANCES ACT TO
AUTHORIZE THE USE OF HEROIN FOR TERMINALLY ILL CAN-
CER PATIENTS

SEPTEMBER 4, 1980

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THERAPEUTIC USE OF HEROIN

THURSDAY, SEPTEMBER 4, 1980

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2322, Rayburn House Office Building, Hon. Henry A. Waxman, chairman, presiding.

Mr. WAXMAN. The subcommittee will come to order.

This morning the subcommittee will receive testimony on H.R. 7334, a bill introduced by our colleague the Hon. Edward R. Madigan.

The legislation proposes to amend provisions of the Controlled Substances Act to recognize the therapeutic value of heroin in the treatment of pain.

At present, heroin is a drug considered to have no accepted medical use in the United States.

One of the most severe and difficult forms of pains to treat, is the intractable pain associated with many forms of cancer. Each week 2,000 new cases of cancer are diagnosed. Despite notable advances in treatment, a significant percentage of these patients will experience the terminal stages of the illness and a degree of pain requiring the administration of narcotic pain killers.

The subcommittee is deeply concerned by reports that currently available analgesics are either ineffective or improperly administered. In particular, it is said the lack of a potent, highly soluble analgesic has condemned a significant number of the terminally ill to weeks and months of cruel and unnecessary suffering.

Heroin is held out as a drug capable of filling that need. It is on behalf of these individuals that today's hearing is being held.

The ability of the terminally ill to die with dignity—without pain—is one of the most basic of human rights. It is a right which has been championed in this country and abroad by the growing hospice movement and should be supported at every level of government and society.

The control of intractable pain through the use of heroin is a challenging issue. We are asked to reassess past prejudices about a drug known to scientists as diacetyl-morphine. The obvious emotional conflict between concern for the ailing and the addiction of our Nation's youth is striking.

Is it possible such a notorious drug—a drug thought for years to bode only ill—could have therapeutic value in a medical era increasingly dependent upon new technologies?

This morning we will hear from a number of distinguished individuals who will discuss the analgesic qualities of heroin and what role it could play in the control of pain. We want to determine whether currently available analgesics are adequate to relieve the intractable pain often experienced by the terminally ill.

We also want to explore whether the Federal Government can be of greater assistance in encouraging the availability and proper use of drugs which can aid physicians in the humane and compassionate treatment of their dying patients.

At this time the subcommittee's ranking minority member, Dr. Tim Lee Carter, has an opening statement.

Mr. CARTER. I want to thank you for the opportunity of expressing my feelings on this subject. I am not going to use my prepared text, but with your permission I will include it for the record.

In 1914, as you know, heroin was banned by the Harrison Narcotic Act because it was so addictive. It is a great pain reliever. There is no question about it. It doesn't cause the nausea that frequently comes from the use of morphine.

A few years ago I was on the President's Commission on Marihuana and Drug Abuse. I had the opportunity at that time to visit England and to see how addicts were treated there. They would go to a hospital and get their regular doses of heroin at a specified time. It seems to me that England has a more effective drug control law than we have. Moreover, this way of providing for those who were addicted to heroin seemed to help prevent crime on the streets at the same time.

People do suffer and die of cancer, and it certainly is agonizing for anyone to see this happen. I remember my sister-in-law a few years ago died of a cancer of the pancreas. I recall her saying, "What am I going to do? What shall I do? What shall I do?"

Of course, she should have had something to relieve her at that time, whether it was morphine, dilaudid, or whatever it might be.

Whether it should be heroin is something that this committee should study. Nevertheless it is certainly true that in those last days, when they are being ushered to the silent chambers of death, we want to make that passage as easy as possible. However, Mr. Chairman, I would hope that we wouldn't give them so much that, in a sense, we would be guilty of euthanasia. I hope that by the introduction or reintroduction of heroin into this country we would not further or make worse the drug problem which we have today.

I am heartened by learning that there is under experimental development a drug called zomepirac which is reputedly more potent in pain-relieving effect than morphine, and not only that, it is not nauseating and it is not habit-forming.

I trust and hope and pray, really, that this drug will have all of these qualities. If we have such a drug, then we can see that those who are suffering the tortures of the damned are relieved and can pass quietly on without our giving them so much that they go on before they should.

Thank you, Mr. Chairman.

[Congressman Carter's prepared statement follows:]

STATEMENT OF HON. TIM LEE CARTER

Mr. CHAIRMAN,

It is a pleasure to join with you in welcoming our distinguished witnesses to the Subcommittee today. I especially would like to welcome -- and commend -- our distinguished colleague from Illinois, Mr. Madigan, for bringing this matter to our attention. His attention to the problems of the terminally ill deserves our recognition.

I certainly share those concerns. In our society we have often attempted to pretend as if death did not occur -- and so we have paid far too little attention to finding ways to insure that comfort and surcease from pain are available to the dying. However, we have recently seen new interest in this area. Hospices are but one example of this interest -- and the need to improve our methods of dealing with the intractable pain of certain of the terminally ill is another. As a physician, I have often been faced with the need to bring relief to those suffering in agony and that is why I believe that it is fitting for this Subcommittee to investigate the issues surrounding the treatment of pain.

Nevertheless, I am not convinced that the legalization of heroin is the answer to this problem. Although it may have happened a long time ago -- previous medical experience with this drug led to a ban on its use in 1914. I do not wish to ignore that experience. Moreover, there are other drugs -- and other methods of treatment other than those commonly used -- which can be used to successfully treat pain, and I certainly would hope that some of those approaches will be discussed today. However, although I do have misgivings about heroin, I want to make clear that my goal is to help to find ways to relieve pain and suffering for those in need. I hope that is the issue on which we can focus today.

Thank you, Mr. Chairman.

READER
FICHE

Mr. WAXMAN. Thank you very much.
 Without objection, the text of H.R. 7334 will be printed at this point in the record.
 [The text of H.R. 7334 follows:]

[H.R. 7334, introduced by Mr. Madigan on May 13, 1980,

Cosponsored on June 17, 1980, by:
 Mr. Green, Mr. Shumway, Mr. Hughes, and Mr. McKinney;

Cosponsored on July 23, 1980, by:
 Mr. Hinson, Mr. Lent, Mr. Duncan of Tennessee, Mr. Sebelius, Mr. Simon, Mr. Mineta, Mr. Rinaldo, Mrs. Holt, Mrs. Fenwick, and Mr. Dannemeyer;

Cosponsored on August 27, 1980, by:

Mr. Guarini, and Mr. Garcia

is as follows.]

A BILL

To amend the Controlled Substances Act to authorize the use of heroin for terminally ill cancer patients.

- 1 *Be it enacted by the Senate and House of Representa-*
- 2 *tives of the United States of America in Congress assembled,*
- 3 That (a) paragraph (b) of schedule I in section 202(c) of the
- 4 Controlled Substances Act (21 U.S.C. 812) is amended by
- 5 striking out clause (10) and redesignating clauses (10)
- 6 through (22) as clauses (9) through (21), respectively.
- 7 (b) Paragraph (b) of schedule II in such section is
- 8 amended by adding at the end the following:
- 9 "(22) Heroin."

1 SEC. 2. (a) Section 303(f) of the Controlled Substances
2 Act (21 U.S.C. 823(f)) is amended (1) by striking out "(f)
3 Practitioners shall" and inserting in lieu thereof "(f)(1)
4 Except as provided in paragraph (2), practitioners shall", and
5 (2) by adding at the end the following:

6 "(2)(A) A practitioner may be registered for the dispens-
7 ing of heroin if the Attorney General determines that—

8 "(i) the practitioner is authorized under the law of
9 the State in which the practitioner practices to dis-
10 pense controlled substances in schedule II;

11 "(ii) the practitioner will dispense heroin in ac-
12 cordance with subparagraph (B); and

13 "(iii) the practitioner will comply with require-
14 ments established by the Attorney General under sub-
15 paragraph (C).

16 A registration issued under this subparagraph shall be in
17 effect for such period (not in excess of one year) as the Attor-
18 ney General may prescribe. Such a registration may be re-
19 newed under the same terms as applied to its initial issuance.

20 "(B)(i) Heroin may only be dispensed for an individual
21 who is an inpatient of a hospital or hospice and who is diag-
22 nosed in accordance with clause (ii) as terminally ill with
23 cancer. An individual shall be considered to be terminally ill
24 with cancer if—

1 “(I) there is histologic evidence of a malignancy
2 in the individual,

3 “(II) the individual's cancer is generally recog-
4 nized as a cancer with a high and predictable mortal-
5 ity, and

6 “(III) there is no treatment recognized by experts
7 as safe and effective for the cancer or therapies recog-
8 nized by experts as safe and effective have been ex-
9 hausted and further treatment of the cancer would not
10 reasonably be expected to benefit the individual.

11 “(ii) A diagnosis that an individual is terminally ill with
12 cancer shall be made before heroin is dispensed for the indi-
13 vidual and shall be made as follows:

14 “(I) The diagnosis shall be initially made by the
15 attending physician of such individual.

16 “(II) The diagnosis of the attending physician
17 must be attested by an oncologist and reviewed and
18 approved by the medical review board of the hospital
19 or hospice in which the individual is an inpatient.

20 “(C) To protect against the diversion into illicit channels
21 of heroin to be made available under this paragraph, the At-
22 torney General shall, within six months of the date of the
23 enactment of this paragraph, by regulation prescribe require-
24 ments respecting the manufacture, storage, distribution, and
25 dispensing of heroin.”

1 (b) Section 304 of such Act (21 U.S.C. 824) is
2 amended—

3 (1) by adding at the end of subsection (a) the fol-
4 lowing: "A registration under section 303(f) to dis-
5 pense heroin may be suspended or revoked by the At-
6 torney General upon a finding that the registrant failed
7 to comply with any requirement under such section.";
8 and

9 (2) by inserting after "303(g)" in the second sen-
10 tence of subsection (d) the following: "or a requirement
11 under section 303(f)".

12 (c) Section 307(c)(1)(A) of such Act (21 U.S.C.
13 827(c)(1)(A)) is amended by inserting "is heroin or" after
14 "unless such substance".

15 SEC. 3. The amendments made by this Act shall take
16 effect upon the expiration of the ninth month beginning after
17 the date of the enactment of this Act.

Mr. WAYMAN. Our first witness this morning is the author of H.R. 7334, the Hon. Edward Madigan.

Mr. Madigan, I would invite you, after giving your testimony, to join us to hear from the other witnesses and ask questions that you may feel are appropriate.

STATEMENT OF HON. EDWARD R. MADIGAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. MADIGAN. Thank you, Mr. Chairman, very much for the kind invitation.

Mr. Chairman, Dr. Carter, Mr. Dannemeyer, I am at the outset compelled to say that having served on your subcommittee, I know the tremendous demands that are made upon the time of the subcommittee, on each of the members of the subcommittee.

I am very grateful for your taking the time to have this hearing on my bill and for the opportunity to speak on behalf of the bill to permit the medical use of heroin for certain terminal cancer patients.

Heroin is widely recognized, Mr. Chairman, as an extremely effective pain reliever, but it is not available for any legitimate medical use in this country.

A small portion of terminal cancer patients would derive great benefit from the controlled use of injectable heroin to relieve their pain, in my opinion.

Under present law, however, any use of heroin is prohibited, despite its acknowledged efficacy. I think it would be instructive at this time to briefly review the history of heroin control legislation.

As Dr. Carter has pointed out in his opening remarks, the Harrison Narcotics Act of 1914 placed restraints on the availability of narcotics which previously were unregulated.

The objective was to limit the amount of opiates available to those necessary only for medical and scientific use. At the time, narcotics were freely dispensed and addiction was a pressing social problem.

Under the Act, a physician was still able to prescribe and distribute opiates in the course of medical practice. Following the Act, however, two Supreme Court cases restricted the rights of doctors to prescribe narcotics for treatment of addiction.

This became an effective ban on any manner of heroin prescription.

In 1924, Congress passed a law prohibiting any importation of crude opium for the purpose of manufacturing heroin.

At present the analgesic for cancer patients experiencing pain is morphine, and in the absence of limiting circumstances, orally administered morphine is just as effective as orally administered heroin.

Oral administration is preferred initially, both for its effectiveness and for the extent to which it permits a patient to function in a relatively normal fashion.

As the disease progresses, however, adequate pain relief through oral administration may become impossible and injected medication may become necessary.

Several factors may cause a need for injected medication. Pain may be so intense that it fails to respond even to large doses of oral morphine.

The patient in severe pain who is unable to obtain adequate relief with the highest effective dose of oral morphine often needs injected medication every 3 or 4 hours. Injections may also be required because unrelieved nausea and vomiting prevent the full absorption of oral medication.

Finally, during the last few hours of life, the patient's increasing debility may make oral administration difficult or impossible.

For the emaciated patient, with little muscle left, the relative insolubility of morphine poses a special problem. For the administration of a high dosage at frequent intervals must be accomplished by means of a high volume injection.

Under those circumstances, the use of a small volume injection is clearly the most humane practice. Thus heroin is the better choice because it is possible to administer heroin in a far smaller volume than morphine.

Heroin salts are more potent and are inherently more soluble than morphine salts. This question of solubility underlies the need for this legislation.

In the recognized absence of an analgesic of equivalent solubility to heroin, I believe Congress should act to make heroin available for the thousands of terminal cancer patients who need it each year.

It is our responsibility, I believe, to see that the dying do not suffer needlessly. Seventeen members of Congress from all parts of the country and from both political parties have joined me in introducing this bill which transfers heroin from schedule I to schedule II and establishes practitioner regulation standards and terms for controlled use in hospitals and hospices only.

The bill sets forth diagnostic guidelines including a definition of terminal cancer, and it provides for appropriate medical review. It directs the Attorney General to promulgate regulations which will protect against diversion into illicit channels and it provides penalties for noncompliance, specifically the suspension or revocation of a practitioner's license.

I recognize that this bill does not automatically make heroin available for those who need it. It is a necessary step in the process, but corresponding administrative action is required along with the identification and cooperation of a commercial source of supply.

I should like to put this question before the subcommittee and the other witnesses this morning: Does an administrative mechanism exist to achieve the desired goal of this bill? Is there a means by which we can provide heroin for the limited patient population which desperately could use it to relieve their suffering during the last phases of a terminal illness?

Mr. Chairman, I believe such an administrative solution may already exist which could ease the pain of those in need.

I want to thank you for taking the time, along with Dr. Carter and Mr. Dannemeyer, to be here this morning for this initial hearing, and I will be happy to answer any questions that you may have of me at this time.

Mr. WAXMAN. I want to thank you for your statement.

I think you have set out the concern that you raised in offering this legislation and the key questions that we would like to have answered, if we are able to have them answered by the witnesses that will be here today.

Whether new law is necessary, whether this is the appropriate step for us to take in terms of dealing with this horror of intractable pain, whether we ought to move to heroin or not.

Thank you for raising this issue, for bringing it to our attention and giving us this opportunity to explore it further as we try to act in a reasonable way and humane way in alleviating tremendous suffering.

Mr. MADIGAN. Thank you, Mr. Chairman.

Mr. WAXMAN. Dr. Carter.

Mr. CARTER. I want to commend the distinguished gentleman on his statement and to ask how we would be able to control this drug so that only those who are terminally ill of cancer would receive it?

Mr. MADIGAN. Well, the bill would provide that it could only be administered in a hospital or a hospice, only to terminally ill patients, and only by a licensed medical practitioner.

That would put this substance under controls similar to other narcotics which are equally habit-forming as heroin, so it would be treated exactly the same as other types of drugs and I would assume—or at least I would hope—that it would pose no more of a problem than other drugs already available under the same circumstances.

Mr. CARTER. I don't want to disagree with my good friend about addictiveness, but it is said that one injection of heroin in some cases is addictive. It is one of those sad things. The thing about it is control. It doesn't matter. You can shake your head all you want to. That is the way it is.

I am not talking to you, I am talking to one of the gentlemen out here.

Mr. MADIGAN. I would only say in response that we are talking about a practice that does exist in a great number of other countries. I am presuming that they have found a way to deal with the concerns that you have. I am sure other witnesses will be able to speak to that.

Mr. CARTER. I told you how it was controlled in England. In this country illegal use of heroin is increasing at this time. I would hope there could be proper control of this substance so it could not get to others. That is of paramount importance, I think.

I want to thank you for an excellent statement. I sympathize with the intent of your legislation.

Mr. MADIGAN. I want to thank you for all of the concerns that you have demonstrated for the medically underserved and the ill and the needy during the years that you have been in Congress. You have been a great inspiration to the minority members and the majority members both on the Commerce Committee and all of the members of that full committee are going to miss you very much.

Mr. CARTER. Thank you very kindly.

Mr. WAXMAN. Mr. Dannemeyer.

Mr. DANNEMEYER. Mr. Chairman, Mr. Madigan, I think you have put your finger on a need in our society today. I think it is ironic that, if one of us was disposed, we could probably walk not more than a mile from where we are sitting right now and acquire all the heroin that the money in our possession would permit us to buy. I don't know that to be a fact. I have not been caused in my life to look for the purchase of heroin, but I am told that it exists.

We live in a pragmatic world. If there is something about this substance that can ameliorate human suffering, every one of us sooner or later is going to see somebody die. One of the things that has intrigued me about the law business over the years is, time and again, when people write a will they say, "if I die."

We are all going to die. The question is, when.

Some deaths are more tragic than others because of the pain that comes, and—I am prepared, as a matter of policy to invest in a medical practitioner the judgment call of when a person is terminally ill.

Somebody has to call that shot. I am not qualified to call it necessarily, although at times—and I have watched death come to members of my family. I think I pretty well knew when death was at the door. If we ameliorate human suffering in this manner in a responsible way, I think it is a constructive thing to do.

Mr. MADIGAN. Thank you very much, Mr. Dannemeyer.

Mr. WAXMAN. Mr. Madigan, thank you.

Our next witness is Mrs. Judith H. Quattlebaum, president of the National Committee on the Treatment of Intractable Pain. She and her organization have been strong supporters of adopting more compassionate methods of managing pain often associated with terminal cancer. The National Committee has recommended the legalization of heroin for this purpose.

I am delighted you could be with us today. I understand you are accompanied by a number of prominent individuals associated with your organization. I would like to have you introduce them for the record.

STATEMENTS OF JUDITH H. QUATTLEBAUM, PRESIDENT, NATIONAL COMMITTEE ON TREATMENT OF INTRACTABLE PAIN; AND HERBERT BERGER, M.D., FOUNDER, NEW YORK STATE SOCIETY OF INTERNAL MEDICINE AND PROFESSOR OF CLINICAL MEDICINE, NEW YORK MEDICAL COLLEGE, ACCOMPANIED BY PETER STERNLIEB, M.D., PAST PRESIDENT, NEW YORK STATE SOCIETY OF INTERNAL MEDICINE; ALLEN MONDZAC, M.D., PAST DIRECTOR, WARWICK CANCER CLINIC, GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER AND PAST CHAIRMAN, DISTRICT OF COLUMBIA MEDICAL SOCIETY'S DRUG DEPENDENCE COMMITTEE; JAMES T. QUATTLEBAUM, M.D., ASSOCIATE CLINICAL PROFESSOR OF PSYCHIATRY, GEORGE WASHINGTON UNIVERSITY MEDICAL SCHOOL; WAYNE COY, JR., COMMITTEE COUNSEL (NCTIP); AND COLONEL MICHAEL CHESSNOE, WASHINGTON, D.C.

Mrs. QUATTLEBAUM. I appreciate being allowed to testify in support of a bill so desperately needed for thousands of suffering men and women. We are grateful to your consideration and to the compassion of Congressman Edward Madigan and his colleagues.

I am Judith Quattlebaum, president of the National Committee on the Treatment of Intractable Pain.

The experts with me today—some of them were planning to come to the other hearing and couldn't make it, including Father Richard A. McCormick, S.J., who is Rose F. Kennedy Professor of Christian Ethics, the Joseph and Rose Kennedy Institute of Ethics at Georgetown University; and Rev. John F. X. Sheehan, S.J., professor and chairman of the Department of Theology at Marquette University; May I present, on my left, Dr. Herbert Berger, past president of the International Society for the Study of Addiction and editor of the Journal of Addiction, a founder of the New York State Society of Internal Medicine, and professor of clinical medicine at New York Medical College.

When American pressure led the British Parliament to consider stopping the use of heroin, British doctors were horrified at the cruelty that would result and asked Dr. Berger to help them by telling of the destructive results of U.S. prohibition. He did so so effectively that Sir Winston Churchill was able to squash the move with a word.

I wondered if—Dr. Berger has a few remarks—he might be allowed to present them after me? He has some prepared remarks he brought with him, if that is possible.

Mr. WAXMAN. Certainly. Without objection, the prepared remarks will be made part of the record.

We have some constraints on time. If you have some additional comments you would like to add, that would be fine.

Dr. BERGER. Thank you.

Mrs. QUATTLEBAUM. We also have Dr. Peter Sternlieb, past president of the New York State Society of Internal Medicine; Dr. Allen Mondzac, past director of the Warwick Cancer Clinic at George Washington University Medical Center, and past chairman of the District of Columbia Medical Society's Drug Dependence Committee; Dr. James T. Quattlebaum, associate clinical professor of psychiatry at George Washington University Medical School; Hono. Kenneth A. Lazarus, a Washington lawyer who was associate counsel to the President of the United States and chief minority counsel to the U.S. Senate Committee on the Judiciary, enroute; Wayne Coy, Jr., our committee counsel, who is in the private practice of law; and Col. Michael Chessnoe, whose wife, Garde, spent her last days, despite intense pain, writing and speaking up for her right and that of all cancer patients to have heroin available.

Our committee is one of laymen and experts from many fields. We are determined to see that terminal pain is given an urgent priority in this country—especially pain that is beyond the control of available drugs. The position of our committee is that heroin should be immediately available to terminally ill cancer patients.

There is a desperate need for better pain control. This need is not being met. There is ample evidence that heroin is a safe and effective painkiller. There is no good reason to deny it to doctors for their dying patients, but the attention of our bureaucracy is elsewhere.

British doctors, with 80 years of clinical experience with heroin, have a flexibility of choice not allowed their American colleagues,

which promotes a positive and aggressive approach, and more precision and innovation in preventing and controlling pain.

They find, for example, that heroin is more rapid acting, causes less nausea and vomiting, and is more humane and efficient by injection than morphine.

Congressman Madigan has already pointed that out.

Its greater potency and solubility allow for much smaller, less painful injections to achieve the effect of much larger and painful injections of morphine.

This can be pathetically crucial for a patient who cannot swallow, or who is wasted with little flesh remaining and who needs large doses of a narcotic analgesic. They have considered other drugs, such as methadone, but Dr. Robert Twycross of Oxford says that when injections are required, heroin "is undoubtedly the best and safest of all the potent narcotic analgesics and is indispensable in the care of a proportion of patients with advanced cancer."

Heroin is safe and effective and addiction is not a concern for the dying. Doctors in this country want it, medical societies endorse its availability for terminal pain, and cancer patients plead for it.

I testify to a groundswell of anguish expressed in thousands of calls and letters to our committee from cancer patients, their families, physicians, and other caring Americans, that present drugs are not enough. They come from all over the country, from and about patients at hospitals, great and small, including our National Institutes of Health.

Many of us watched on public television recently how a cancer patient, terrified of pain, planned and carried out her own suicide. No one can say how many others have ignored the empty assurance commonly tossed to them, that they will be spared unbearable pain at the end.

In fact, medical reports show that their terror is justified. A sample poll immediately after the broadcast found 71 percent of viewers approved of suicide in terminal illness. One person called me after the program—they posted our phone number on PBS—and told me she had terminal cancer and although she was given all the morphine they told her she needed at NIH, she was still in pain. She planned to commit suicide.

I can also testify to the obstruction of our work by our Federal bureaucracy. I would like to submit here for the record evidence of misstatements and misrepresentations of facts about the use of heroin in England and of findings about its superiority, that have been made by Drs. Diane Fink and Seymour Perry of our National Institutes of Health.

This includes copies of their letters, as well as communications from Oxford and St. Christopher's Hospice, London, more current, than and directly refuting, the Fink/Perry assertions. [Exhibit A, see p. 15.]

For example: Dr. Perry states in a letter dated April 25, 1980 that St. Christopher's has abandoned the use of heroin. St. Christopher's says in a letter dated June 17, 1980 that they have not. Both are submitted, along with similar examples.

I suggest that such dramatic evidence of flagrant bias disqualifies Drs. Fink and Perry and their associates as objective scientists in

this matter. Their total loss of credibility also beclouds their promises of research and interpretations of research.

I testify that in NIH interagency meetings which I have attended, heroin was said to be unnecessary in March 1978, before any research had commenced. No balanced, or even factually accurate, discussion of heroin has taken place since.

Any research emerging will undoubtedly be expensive, but I do not see how it can be taken seriously.

Heroin is a crucial missing tool in our attack on terminal pain. Without it, any total war on pain is superficial and simplistic. Without it, a sophisticated, flexible, humane and believable approach to better pain control and prevention cannot even begin. Without it, many are dying in agony.

In speaking for our membership of several thousands, I include among them many who wrote to us of their fear that they would die in agony—and now have died, some in agony. They are here with us in spirit.

We all hope you will join with Congressman Madigan and his courageous colleagues in approving their prudent, just and compassionate proposal.

The subcommittee has asked me five additional questions. My concise answers are submitted, with a booklet that responds more fully, prepared by the Honorable Kenneth A. Lazarus, entitled "Authorizing the Medical Prescription of Heroin for Terminal Cancer Patients Under Controlled Circumstances." [Exhibit B, see p. 34.]

Mr. WAXMAN. Thank you very much. Those other documents that you referred to will be received by us for the record.

Mrs. QUATTLEBAUM. Fine.

[Testimony resumes on p. 74.]

[Attachments to Mrs. Quattlebaum's prepared statement follow:]

EXHIBIT A--Evidence of misstatements and misrepresentations of facts about the use of heroin in England and of findings about its superiority

Information sheets given to Ralph Wadeson, MD, and Betsy Hague, MSN, of NUTIP during visit to Hospital Unit of Dr. Robert Twycross, Sir Michael Sobell House, The Churchill Hospital, Oxford, England, in August, 1980. (3 pages)

FACT SHEET NO. 2

MEDICINAL USE OF DIAMORPHINE

1. Diamorphine (diacetylmorphine, heroin) is widely used in Great Britain as a potent analgesic to relieve severe acute pain (post-operative, renal colic, post-myocardial infarction) and also in advanced cancer.
2. Diamorphine when given intravenously has an earlier onset of action, is more sedating, and causes less vomiting than morphine. These are all properties which are desirable when seeking to relieve severe acute pain.
3. Because of relatively rapid in vivo deacetylation, diamorphine has the same effects as morphine when given orally.
4. Because morphine is less completely absorbed than diamorphine, the equi-analgesic dose of morphine is 50% greater than that of diamorphine.
5. In the vast majority of advanced cancer patients in whom regular oral medication is satisfactory, morphine and diamorphine may be regarded as interchangeable.
6. However, about 10% of terminal cancer patients with pain require injected medication, either because of intractable vomiting or non-response to high doses of oral morphine.
7. It is always possible to administer diamorphine in a smaller volume than morphine for two reasons:
 1. diamorphine salts are more soluble than morphine salts
 - ii. because it is unstable when dissolved, diamorphine is manufactured as "freeze-dried" pellets whereas morphine is supplied in solution, which means it is only available in volumes of 1 ml. or more.
8. In emaciated patients, with little muscle left, a small volume injection is both desirable and humane.
9. In the patient with pain and intractable vomiting, the volume of each injection can be substantially reduced:

<u>Analgesic</u>	<u>Anti-emetic</u>	<u>Total</u>
morphine x mg. in 1 ml.	1 ml	2 ml
diamorphine y mg. in 0 ml.*	1 ml	1 ml

* The diamorphine is dissolved in the antiemetic (which is already in solution).

- 2 -

10. A large dose of oral morphine means a dose in excess of 100 - 120 mg every four hours.
11. Clinical experience indicates that decreasing returns are obtained with morphine when given in oral doses much above 100 - 120 mg.
12. In a patient with severe pain who fails to receive adequate relief with 100 - 120 mg of oral morphine, at least 40 mg of diamorphine by injection will be required.
13. Sometimes 60 mg or even 90 - 120 mg will be necessary and usually needs to be given every three hours.
14. From the tables appended, it will be seen that the volume of a comparable dose of morphine would be at least 3 - 6 ml.
15. In practice, the volume would be greater, possibly 6 - 12 ml, because injectable solutions are always prepared with the drug in less than maximum concentration to avoid precipitation if the storage conditions are not ideal.
16. It has been suggested that the problem of high volume requirements could be circumvented by preparing freeze-dried ampoules of methadone.
17. However when given repeatedly, methadone has a prolonged half-life, more than 3 days compared to about 3 hours for diamorphine, and is more likely to cause problems in relation to respiratory depression.
18. In the light of these considerations, British physicians specialising in the care of patients with far-advanced cancer consider diamorphine (diacetylmorphine, heroin) an indispensable potent narcotic analgesic.

-
1. Twycross, R.G. (1974)
Clinical Experience with Diamorphine in Advanced Malignant Disease.
International Journal of Clinical Pharmacology, Therapy and Toxicology,
2, 184-198.
 2. Twycross, R.G. (1977)
Choice of Strong Analgesic in Terminal Cancer: Diamorphine or Morphine?
Pain, 2, 93-104.

TABLE 1

Theoretical injection volume of equipotent doses of narcotic analgesics

Preparation	Solubility in water at 25°C (1 g in x ml)	Potency relative to diamorphine	Volume required to dissolve equi-analgesic quantities (ml)			
			30	60	90	
Diamorphine hydrochloride	1.6	1	0.1	0.1	0.15	0.2
Morphine sulphate	21	1/2	1.5	3	4.5	5
Methadone hydrochloride	12	1	0.4	0.75	1	1.5

TABLE 2

Actual injection volume of equipotent doses of narcotic analgesics

Preparation	Available ampoules (mg/ml)	Volume of equi-analgesic doses (ml)			
		30	60	90	120 mg
Diamorphine hydrochloride	(Freeze-dried)	0.1	0.1	0.15	0.2
Morphine sulphate	15*	4	8	12	16
	30**	2	4	6	8
Methadone hydrochloride	10	3	6	9	12

* Maximum strength available in the United States

** Maximum strength available in the United Kingdom

Excerpt from: Shapiro, Eugene L., "The Right of Privacy and Heroin Use for Painkilling Purposes by the Terminally Ill Cancer Patient," 21 ARIZ. L. REV. 421 (1979), pages 45-47, clarifying Twycross Tables.

The enormous contrast in volume requirements for the dissolution of equipotent doses of heroin and morphine is reflected in the following tables, prepared by Dr. Twycross³⁰ and previously unpublished. Table 1 illustrates the volume which is theoretically required, based upon an approximate potency ratio of 2:1 (heroin:morphine). This approximation is conservative, for by injection heroin has been estimated to be between two and four times as potent as morphine.³¹

Table 1
THEORETICAL INJECTION VOLUME OF EQUIPOTENT
DOSES OF NARCOTIC ANALGESICS

Preparation	Solubility in Water at 25 °C (g in 1 ml.)	Potency Relative to Diamorphine*	Volume Required to Dissolve Equivalent Quantities (ml.)			
			(mg. diam.)			
			30	60	90	120
Diamorphine Hydrochloride	1.6	1	0.1	0.1	0.15	0.2
Morphine Sulphate	21	1/2	1.5	3	4.5	6
Metadone Hydrochloride	12	1	0.4	0.75	1	1.5

*Approximate.

In actual practice, however, Dr. Twycross has found that the volume requirements for comparable doses of morphine are far greater, for in both Great Britain and the United States solutions of morphine for injection are prepared with the drug in less than maximum concen-

Table 2
ACTUAL INJECTION VOLUME OF EQUIPOTENT
DOSES OF NARCOTIC ANALGESICS

Preparation	Available Amoules (mg/ml)	Volume of Equivalent Doses (ml)			
		(mg. diam.)			
		30	60	90	120
Diamorphine Hydrochloride	(freeze-dried)	0.1	0.1	0.15	0.2
Morphine Sulphate	15*	4	8	12	16
	30**	2	4	6	8
Metadone Hydrochloride	10	3	6	9	12

*Maximum strength available in the United States.

**Maximum strength available in the United Kingdom.

tration to avoid the possibility of precipitation if storage conditions are not ideal. Table 2 reflects actual injection volume requirements in each country. Heroin, because it is unstable when dissolved, is manufactured as "freeze-dried" pellets, and thus is not produced in less than maximum concentration.³²

30. See Table 1. Dr. Twycross is now affiliated with The Churchill Hospital and is a clinical lecturer at Oxford University.

31. Reichlin, *et al.*, *supra* note 29, at 44-46; Jaffe & Martin, *supra* note 17, at 256.

32. See Table 2.

Copy of letter to Mrs. Parker, member of Advisory Council of NUTIP. Please note underlining and notations are by Judith Quattlebaum, of NUTIP.



St. Christopher's Hospice

51-53 Lauris Park Road, Sydenham, SE26 8DZ. Telephone: 01-778 8252

Chairman: Dame Albertine Winger, D.S.E.
Medical Director: Dame Cecily Saunders, D.S.E.
Deputy: Dr. T. S. West, O.B.E.
Matron: Miss J. H. Wilkins, B.Sc. F.N. 100

17th June, 1980

DHS/BW

Mrs. James M. Parker,
5412 Studale Avenue,
Norfolk, Virginia 23508,
U.S.A.

Dear Mrs. Parker,

Thank you for your letter of the 9th June. We should be pleased to welcome you to visit on Friday 19th September and have reserved an additional place so that if you are accompanied by someone who would really benefit from a day visit they will be able to join you. As you will see from the programme which I sent the visit is essentially for people with some knowledge and interest in hospice work, but no doubt you will choose wisely and let us know if, in the end you will be on your own.

I enclose a copy of our current drug sheet and should make it clear that we have given up using heroin orally, but do give it by injection when patients can no longer take oral drugs. The reason for this is that heroin is more soluble and can therefore be given in a smaller volume of water. I hope the drug sheet will be useful.

Yours sincerely,

D. H. Summers

Miss D.H. Summers,
Co-ordinator of Studies

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Registered as a Charity, No. 212887 and as a Company in England, No. 681580

This is a copy of a letter sent to a member of the National Committee on the Treatment of Intractable Pain by Dr. Seymour Perry of NIA. Dr. Perry used this as a basis for reply to an inquiry about the Buckley column about NTIP and heroin for the dying. Please note that underlining and notation are by Judith Gottlieb of NTIP.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

April 21, 1980

Mr. William F. Buckley, Jr.
c/o The Washington Star
225 Virginia Avenue, S. E.
Washington, D. C. 20001

Dear Mr. Buckley:

I have read your article, "A Crusade Against Pain," which appeared in the Washington Star of April 21. Unfortunately, you appear to have been significantly misled concerning the value and benefits of heroin in the alleviation of severe pain in patients with terminal cancer. I have enclosed a copy of the article in the journal, Pain, of December 1977 which you cited in support of your contention that the American public is being denied a superior drug for pain. This article clearly states that the only benefit for heroin as compared to morphine is in patients in the very terminal state who are unable to swallow and need injections.

→ You should also realize that the famous Dr. Christensen's Review in London, the pioneer in the care of the terminally ill, has disputed the use of heroin in favor of morphine, the most commonly used drug for severe pain in this country.

Finally, you may not be aware of the fact that there are currently two cooperative studies in patients of heroin and morphine in this country (at Sloan-Kettering Memorial Institute and at Georgetown University). Should the evidence warrant it, the Committee will not hesitate to urge that heroin be made more readily available to physicians for use in treating patients with severe pain.

Given the sad experience with drug abuse in this country in recent years, I am sure you would agree that legalizing a drug such as heroin should only be taken when there is compelling evidence that it will add a valuable agent to helping the terminally ill.

The Interagency Committee heard testimony from the leaders of the major hospitals in this country, Canada, and the United Kingdom. It was their

unanimous opinion that pain in virtually every patient could be prevented and/or managed successfully with drugs currently available in the United States. The key point that all experts emphasize is that patients with severe pain must be watched closely and analgesics administered so as to anticipate the appearance of pain. This is in marked contrast to the usual administration which is on "as needed" basis. Should you be interested in the details, I have enclosed a copy of the Interagency Report to the White House (see page 75 and particularly, page 180).

In the interest of responsible journalism, I think you owe your readers a better exposition of the current status of heroin for the alleviation of pain than that which is in your article of April 22.

Sincerely,

Seymour Perry, M.D.
Co-Chairperson
Interagency Committee on
New Therapies in Pain and Discomfort

Enclosure

Copy of letter from Dr. Diane Fink of NCI to Congressman Whitehurst, who in turn sent a copy to Mrs. James R. Packer, member of the Advisory Council of NCILP. Date of letter is May 29, 1980. Please note that notations and underlining are by Judith Guttelsohn of NCILP.



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20892

The Honorable G. William Whitehurst
House of Representatives
Washington, D.C. 20515

Dear Mr. Whitehurst:

I am responding to your letter of May 6, 1980, to Mr. Richard D. Warden of the Department of Health and Human Services.

The Interagency Committee on Pain and Discomfort was formed in late 1977 to assess the status of research on intractable pain and the humane care of dying patients and to develop recommendations in these two areas. The Committee was to develop recommendations on expediting the process whereby heroin, marijuana, cannabinoids, and other drugs scheduled under the Controlled Substances Act could be made available to investigators for research purposes.

The Interagency Committee heard testimony from the leaders of major hospices in this country, Canada, and the United Kingdom. It was their unanimous opinion that pain in virtually every cancer patient could be prevented and/or managed successfully with drugs currently available in the United States. The key point that all experts emphasized is that patients must be watched closely and analgesics administered so as to anticipate the appearance of pain. This is in marked contrast to the usual administration, which is on an "as needed" basis. Should you be interested in the details, I have enclosed a copy of the Interagency Committee Report, submitted to the White House.

It is important to note that the famous St. Christopher's Hospice in London, the pioneer in the care of the terminally ill, has abandoned the use of heroin in favor of morphine, the most commonly used drug for severe pain in this country.

Finally, there are currently two comparative studies under way in this country comparing the effects of morphine and heroin. The Interagency Committee plans to continue to reassess the possible medical issues related to heroin and will make appropriate recommendations based on scientific data available.

I hope that this information is of help to you.

Sincerely yours,

Diane J. Fink
Diane J. Fink, M.D.
Associate Director for
Medical Applications of
Cancer Research
National Cancer Institute

Enclosure

PROPERTY OF THE NATIONAL COMMITTEE ON THE TREATMENT OF INTRACTABLE PAIN,
P.O. BOX 34571, WASHINGTON, DC 20034 or 9300 RIVER ROAD, POTOMAC, MD. 20854

AFFIDAVIT OF DR. ROBERT GEOFFREY TWYLCROSS

I, Robert G. Twycross, being first duly sworn on oath,
depose and say as follows:

1. I am a Registered Medical Practitioner in the
United Kingdom.

2. I am presently the Consultant Physician-in-
Charge, Sir Michael Sobell House, The Churchill Hospital, Ox-
ford, England and Consultant Physician, Oxford Regional Pain
Relief Unit, Abingdon, Oxfordshire, England.

3. I received my pre-clinical training at St.
Peters College, Oxford University, where I also obtained a
second class honors degree in Physiology (B.A. Oxon 1962).

4. I completed my medical training and was awarded
a medical degree at the Radcliffe Infirmary, Oxford (B.M., Bch.
Oxon 1965).

5. My internship was served at the Radcliffe Infir-
mary after which I held several resident posts in internal medi-
cine, including one year at the Royal Infirmary, Lancaster, two
years at The District Hospital, Epsom, and one year at the Royal
Infirmary, Manchester. During this time I obtained a higher
degree in internal medicine, Membership of the Royal College of
Physicians of London (1969).

6. In 1971 I joined the staff of St. Christopher's
Hospice, Lawrie Park Road, London, England, as Research Clinical
Pharmacologist.

7. During my tenure on the staff at St. Christopher's Hospice from 1971-1976, I undertook a complete review of the use of diamorphine (diacetylmorphine, heroin) for the treatment of pain in advanced cancer. Several controlled tests were undertaken, the results of which are included in my dissertation entitled "Studies on the Use of Diamorphine in Advanced Malignant Disease." Based on this dissertation I was awarded the higher medical degree of Doctor of Medicine, Oxon (D.M. 1977).

8. Diamorphine (diacetylmorphine, heroin) is widely used in Great Britain as a potent analgesic to relieve severe pain in acute situations (post-operative, renal colic, post-myocardial infarction) and also in advanced cancer. A summary of the scientific studies conducted on diamorphine during the last twenty years is contained in the attached article, "Choice of Strong Analgesic in Terminal Cancer: Diamorphine or Morphine," Twycross (1977), Pain, 3, 93-104.

9. In summary, diamorphine when given intravenously has an earlier onset of action, is more sedative, and causes less vomiting than morphine. These are all properties which are desirable when seeking to relieve severe acute pain.

10. Diamorphine when given orally has the same effect as morphine. The difference between the two in the case of oral administration is that alimentary absorption is less complete with morphine, so that the equi-analgesic dose of morphine is some 50% greater than that of diamorphine. For many advanced cancer patients needing a potent analgesic, regular oral admin-

istration is satisfactory. See, "Clinical Experience with Diamorphine in Advanced Malignant Disease," Twycross (1974), International Journal of Clinical Pharmacology, Therapy and Toxicology, 9, 184-198.

11. However, about 10% of terminal cancer patients with pain require injected medication. There are two main reasons for this. One is intractable vomiting (oral medication is vomited before it can be fully absorbed) and the other is pain so severe that it fails to respond even to large doses of oral morphine.^{1/} Such patients may need injected medication every three or four hours. In emaciated patients, with little muscle left, a small volume injection is both desirable and humane.

12. It is always possible to administer diamorphine in a smaller volume than morphine for two reasons:

1. Diamorphine salts are inherently more soluble than morphine salts
2. Because it is unstable when dissolved, diamorphine is manufactured as "freeze-dried" pellets whereas morphine is supplied in solution, which means it is only available in volumes of 1 ml. or more.

1/ A large dose of oral morphine means a dose in excess of 100-120 mg every four hours. Clinical experience indicates that decreasing returns are obtained with morphine when given in oral doses much above 100-120 mg.

13. In the case of the patient with pain and intractable vomiting, the volume of each injection, as demonstrated in the following chart, can be substantially reduced.

Treatment of Pain & Intractable Vomiting

<u>Analgesic</u>	<u>Anti-emetic</u>	<u>Total</u>
morphine x mg. in 1 ml.	1 ml	2 ml
diamorphine y mg. in 0 ml.*	1 ml	1 ml

* The diamorphine is dissolved in the antiemetic (which is already in solution).

14. In the case of the patient with severe pain who fails to receive adequate relief with oral morphine (100-120 mg), a dose of a minimum of 40 mg. of injected diamorphine will be necessary to control the pain. The more likely dosage requirement is 60 mg; sometimes 90-120 mg. will be necessary. Such doses need to be given every three hours. From the two tables attached hereto, it can be seen that the volume of a comparable dose of morphine would theoretically be 3-6 ml but in practice would be greater, possibly 6-12 ml, because solutions for injections are generally prepared with the drug in less than maximum concentration to avoid the possibility of precipitation if the storage conditions are not ideal.

15. It has been suggested that the problem of high volume requirements could be circumvented by preparing freeze-dried ampules of methadone. However when given repeatedly,

methadone has a prolonged half-life,^{2/} more than 3 days compared to about 3 hours for diamorphine. This results in accumulation of methadone in the body, causing problems in relation to respiratory depression, and limiting the freedom of doctors and nurses to manipulate dosages to achieve good pain control.

15. In light of these considerations, British physicians specializing in the care of patients with advanced cancer consider diamorphine (diacetylmorphine, heroin) to be an indispensable potent narcotic analgesic.

Robert Geoffrey Twycross
Dr. Robert Geoffrey Twycross

District of Columbia

Subscribed and sworn to before me this 1st day of
 February, 1978.

Sherley C. Purvis
Notary Public

My Commission expires:

April 14, 1980

^{2/} Half-life means the time taken for the concentration of a drug in the blood to fall from the peak value to half the peak value.

TABLE I

THEORETICAL INJECTION VOLUME OF EQUIPOTENT
DOSES OF NARCOTIC ANALGESICS

Preparation	Solubility in Water at 25°C (1 G in x ml)	Potency relative to diamorphine*	Volume required to dissolve equi-analgesic quantities (ml)			
			30	60	90	120 mg
Diamorphine hydrochloride	1.6	1	0.1	0.1	0.15	0.2
Morphine sulphate	21	1/2	1.5	3	4.5	6
Methadone hydrochloride	12	1	0.4	0.75	1	1.5

* Approximate and based on Table 15-3 in Goodman & Gilman (1975)

TABLE 2

ACTUAL INJECTION VOLUME OF EQUIPOTENT
DOSES OF NARCOTIC ANALGESICS

Preparation	Available ampoules (mg/ml)	Volume of equi-analgesic doses (ml)			
		30	60	90	120 mg
Diamorphine hydrochloride	(Freeze-dried)	0.1	0.1	0.15	0.2
Morphine sulphate	15*	4	8	12	16
	30**	2	4	6	8
Methadone hydrochloride	10	3	6	9	12

* Maximum strength available in the United States

** Maximum strength available in the United Kingdom

COPY

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Pain, 3 (1977) 93-104

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Research Reports

CHOICE OF STRONG ANALGESIC IN TERMINAL CANCER:
DIAMORPHINE OR MORPHINE?

ROBERT G. TWYGCROSS *

St. Christopher's Hospice, Lauris Park Road, London SE26 6DE (Great Britain)

(Accepted September 29th, 1976)

SUMMARY

A controlled trial of diamorphine (diacetylmorphine, heroin) and morphine is reported in which the two drugs were administered regularly by mouth in individually determined effective analgesic doses. Elixirs contained cocaine hydrochloride 10 mg/dose; other drugs were prescribed when indicated clinically. 699 patients entered the trial and, of these, 146 crossed from diamorphine to morphine, or vice versa, after about two weeks using an oral potency ratio of 1.5/1 determined in a pilot trial. Additional medication and survival were closely similar in both treatment groups.

In the female crossover patients, no difference was noted in relation either to pain or the other symptoms evaluated. On the other hand, male crossover patients experienced more pain, and were more depressed, while receiving diamorphine. In these, the potency ratio of diamorphine to morphine appeared to be less than 1.5/1. If this is allowed for, then the difference in mood is probably not significant. Compared with male patients, fewer females required a dose of 10 mg or more, but more were prescribed an anxiolytic. The ability to do without a 2 a.m. dose appeared to be related more to the size of the dose than to gender or treatment. It is concluded that, provided allowance is made for the difference in potency, morphine is a satisfactory substitute for orally administered diamorphine. However, when injections are necessary, the greater solubility of its hydrochloride gives diamorphine an important practical advantage over morphine, especially when large doses are required.

* Present address: Sir Michael Sobell House, The Churchill Hospital, Headington, Oxford, Great Britain.

Summary of Twycross Pain report on study of 699 patients. Please note that notations and underlining are by Judith Quattlebaum by NCTIP. Dr. Twycross gave his affidavit with entire report.

Copy of beginning page of:

Introduction to "Clinical Experience with Diamorphine in Advanced Malignant Disease" Twycross refers to in his affidavit, in addition to his reference to his report in Pain. Twycross gives entire report to accompany affidavit.

Diamorphine - advanced malignant disease - Clinical

Clinical experience with diamorphine in advanced malignant disease

R. G. Twycross

St. Christopher's Hospice, London/England

Each year, more than four hundred patients with advanced cancer are treated with diamorphine at St. Christopher's. It is administered regularly every four hours in order to achieve analgesia. Other drugs are prescribed when indicated. In order to answer some of the many questions concerning the use of diamorphine in this way, it was decided to review 500 patients admitted consecutively with advanced malignant disease. It was concluded that:

1. Although, on account of increasing debility, most patients received parenteral treatment during the last 12-48 hours, the majority can be maintained on orally administered diamorphine prior to this time.
2. There is no single optimal dose or maximum effective dose of diamorphine.
3. The prescription of diamorphine does not, by itself, lead to impairment of mental faculties.
4. Tolerance is not a practical problem.
5. Psychological dependence does not occur.
6. Physical dependence may develop, but appears not to prevent the downward adjustment of the dose of diamorphine when considered clinically feasible.

Introduction

St. Christopher's Hospice is a medical foundation for those in need of hospital care on account of advanced malignant disease. About 500 patients are admitted each year and, through an outpatient and domiciliary service, an equal number are supported at home. More than 80% of the inpatients receive diamorphine at some time. Usually it is prescribed for severe pain; occasionally, for distressing cough or dyspnoea due to the malignant process or for

general discomfort when other measures have failed. About 15% of the patients prescribed diamorphine receive it either predominantly or exclusively by injection, the rest receive it by mouth in an elixir containing both diamorphine and eucaine¹. It is administered regularly every four hours in order to achieve and maintain pain relief. The initial dose of diamorphine is usually 2.5-10 mg; this is adjusted as necessary until effective analgesia is obtained. The dose of eucaine, however, is not altered. With the aid of a night sedative many patients do not require a dose at 1 a.m. though, if necessary, the patient is wakened to have further medication rather than allow him to wake up later complaining of pain. Ultimately, most patients are transferred to parenterally administered diamorphine for the last 12-48 hours on ac-

¹ Diamorphine Hydrochloride	2.5 mg or more
Concaine Hydrochloride	10 mg
Ethyl Alcohol 95% B.P.	2.5 ml
Syrup (66% Sucrose in water W/V)	5.0 ml
Chloroform Water to	30.0 ml

Presented at the 5th International Symposium on Clinical Pharmacology "Analgesia in Terminal Cancer", Athens, Sept. 11, 1973.



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20894

June 14, 1978

Ms. Judith M. Quattlebaum
President
National Committee on the Treatment
of Intractable Pain
9300 River Road
Potomac, Maryland 20854

Dear Ms. Quattlebaum:

Thank you for sending me a copy of the June 1978 Newsletter of the National Committee on the Treatment of Intractable Pain. In my view, the article in reference to my role concerning heroin and the State Medical Society was grossly inaccurate.

I felt it was my responsibility to bring to the attention of Dr. Mayle the recent study of Dr. Teycross in which he finds no advantage in using heroin (diacetylmorphine) compared to morphine.

This article was distributed to members of the Interagency Committee at a previous meeting; and since you are on the mailing list, you should have received a copy. In the event it went astray, I have enclosed another copy for your information.

In the interest of responsible reporting, I hope you will bring this study to the attention of your readers.

There are a number of other inaccuracies in the article in your Newsletter such as the discussion of the study of heroin vs. morphine at the Bloom-Kattering Memorial Center. Contrary to the statement in the article, it is anticipated that results of this study will be available within one year.

Sincerely,

Seymour Perry

Seymour Perry, M.D.
Associate Director for Medical
Applications of Research

Enclosure

Note by Judith M. Quattlebaum of NCITP as follows (as well as above underlining):
The recent study by Dr. Robert Teycross (1977) Pain involving 699 patients, found heroin superior when large doses of a narcotic analgesic are required--Teycross found heroin superior to morphine. See attached affidavit by Dr. Robert Teycross in which he refers to his study reported in Pain to indicate that heroin is indispensable when large doses of a narcotic analgesic are required.

March 8, 1979

HEROIN

Current Status
Interagency Committee on
New Therapies for Pain and Discomfort

Heroin was introduced as a substitute for morphine to minimize the danger of addiction, but by the early part of this century experience suggested that it was even more dangerous. Consequently, in 1924 heroin was banned in the United States.

Since heroin is not available to physicians in this country, morphine and other narcotics are employed for the relief of moderate to severe pain. Often the use or misuse of these drugs has not provided adequate pain relief for terminally ill patients. In many instances, the dosage and scheduling used has been insufficient to adequately control the patient's pain. Whatever the reason for the inadequacy, physicians, families of patients, and others sensitive to the suffering of the patients have proposed that heroin be made available for the terminally ill. Anecdotal reports from abroad concerning the use of heroin for such patients have received nationwide publicity, and a number of civic, professional and medical groups in this country have urged that similar use of heroin be permitted here.

Few scientific studies have been conducted on the relative safety and efficacy of heroin and morphine. In at least one reported study from England, involving 699 patients, heroin was not found to be superior. England has generally abandoned its use as an orally administered drug. However, concern for the suffering of the terminally ill dictates that additional heroin research be undertaken.

The Interagency Committee on Pain and Discomfort was charged early in 1978 with the responsibility of facilitating therapeutic research studies to investigate the mechanisms of pain and its relief. One such investigation includes the scientific evaluation of heroin. Such studies could serve as a basis for decision regarding the status of heroin.

The lack of an available commercial product of heroin required a government research effort to develop a suitable human use product. Further, since by law heroin cannot be manufactured in the United States, it had been necessary to use confiscated street heroin as a source of material for research. The adulterants commonly used in street heroin as well as the chemical problems of the drug also posed difficulties in preparing a chemically pure substance for formulation. After some months, these difficulties have been resolved and heroin is now available from the National Cancer Institute for the use of clinical investigators in studies of its effects in terminally ill cancer patients. Two such studies

(Above taken from The Interagency Committee on New Therapies for Pain and Discomfort, Report to the White House, May 1979, Seymour Perry, M.D., Chairman. Underlining in paragraph three has been added by Judith Quattlebaum. The Tyrones study in Pain of 699 patients found heroin superior to morphine when large doses are required. Please see Tyrones affidavit also submitted, in which he refers to this Pain study to show that heroin is essential when injections are required. Notations as well as underlining made by Judith H. Quattlebaum of NCTIP.

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applied directly to the eye in drop form. In this form, drug delivery to the eye could be more precisely controlled than is possible with marijuana that is smoked, and controlled studies would be easier to carry out. It is also hoped that such a derivative would eliminate or at least greatly reduce marijuana's intoxicating effects, an undesirable characteristic of the drug for most patients with glaucoma.

It is important to emphasize that studies are also needed to show whether visual function is preserved when marijuana is used to reduce the intraocular pressure in glaucoma patients. No such studies of marijuana are underway as yet. Past experience with other purported glaucoma treatments has shown that although a drug may lower intraocular pressure, it does not necessarily follow that visual function will be maintained.

Because one of the National Eye Institute's program priorities is to support the scientific evaluation of new methods of treating glaucoma, the NEI welcomes the submission by qualified investigators of applications for research on the therapeutic potential of marijuana as a glaucoma drug. Any such applications received will undergo the same dual level review for scientific merit and program relevance as do all research grant proposals submitted to the National Institutes of Health and will be given full consideration by the National Eye Institute staff. Any investigator contemplating the submission of such an application to NEI may therefore wish to contact the National Eye Institute before developing his/her proposal. Inquiries may be directed to Anita Suran, Ph.D., Director, Glaucoma Program, National Eye Institute, Building 31, Room 6A31, National Institutes of Health, Bethesda, Maryland 20014.

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July 1979

EXHIBIT B--Authorizing the Medical Prescription of Heroin for Terminal Cancer Patients Under Controlled Circumstances, and concise answers added by Judith Quattlebaum

**NATIONAL COMMITTEE ON THE TREATMENT
OF INTRACTABLE PAIN**

July, 1979

**NATIONAL COMMITTEE ON THE TREATMENT
OF INTRACTABLE PAIN**

P. O. Box 34571
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INTRODUCTORY NOTE

Heroin (diamorphine) is an extremely effective pain-killer with particular potential for relieving the distress of terminally-ill patients. At the present time, however, a medical doctor is not authorized to utilize the drug for this limited purpose.

Our nation has effected a curiously negative approach to the use of heroin as an analgesic for the elimination of pain in terminally-ill patients. This negative approach is a corollary of our drug policy which has concentrated on the prohibition of heroin abuse, to the exclusion of considering valid medical uses of the drug.

This approach—effected through a sharp focus on law enforcement—has unduly eradicated any legitimate medical use. Our existing drug legislation, which addresses the use of heroin as having “no current accepted medical use,”¹ has as its basis legislation enacted 65 years ago. A review of the evolution of our drug policy is necessary to understand the status of heroin today.

HISTORY

The starting point of modern drug legislation is the Harrison Narcotics Act, which was enacted in 1914.² The Act was passed in response to an international agreement to which the United States became a signatory in 1912, the Hague Opium convention.³ The foundation of the

¹ *Controlled Substances Act*, 21 U.S.C. § 801 (1971).

² *Harrison Narcotics Act*, 38 Stat. 785 (1914).

³ Israel, S. and Mogill, K.M., “Decriminalizing Heroin,” 54 *Mich. St. B. J.* 283, 285 (1975). Each country was left to its own administrative devices.

agreement was a policy of gradual suppression of narcotic trade and the promise of adopting internal narcotics control methods by participant nations.⁴ The objective was to limit the amount of opiates to that necessary for medical and scientific use.⁵ The United States favored this goal since, at the time, no controls existed on the use of narcotics and addiction was widespread.⁶ Since narcotics were freely dispensed, addiction was viewed as a social problem and one that required controls placed upon it.⁷ The Harrison Narcotics Act established control over the manufacture, importation and prescription of heroin by licensing, record keeping and taxation provisions.⁸ The thrust was:

* * *

"(1) ... to expose to federal surveillance the illegal traffic in narcotics from its points of entry or manufacture to its point of consumption; and

⁴"History of Heroin," *Bulletin on Narcotics* 5 (April-June 1953): 3-16.

⁵G. Gay and L. Way, "Pharmacology of the Opiate Narcotic," in *It's So Good, Don't Even Try It Once*, D. Smith and G. Gay, Ed., (Englewood Cliffs, N.J.: Prentice-Hall, 1972), 57.

⁶The typical "addict" of 1914 was a middle class person who purchased over-the-counter patent medicine containing morphine, heroin and codeine as a panacea for a wide variety of ills. Until the 1906 Pure Food and Drug Act there were no labelling requirements so consumers were unaware of the contents therein.

⁷William Preston theorizes that organized medicine and police lobbies promoted the drive, the former to undermine proprietary competition and nonmedical dispensing, the latter to create an easy scapegoat for the escalation of urban crime, in "How We Became Addicted to Drug Control," *Civil Liberties Review* 4 (July-August 1977): 68-72.

⁸38 Stat. 785 (1914).

- (2) . . . [to] provide criminal penalties for any trafficking in narcotics outside the legally established patterns."⁹

* * *

Legal outlets for the use of narcotics did exist within the confines of medical practice. The physician was allowed to prescribe and distribute the drugs "... in the course of his medical practice."¹⁰

In the wake of the Harrison Narcotics Act, two Supreme Court cases specifically prohibited the rights of physicians to prescribe narcotics for the treatment of drug addiction. *Webb v. United States* held that the maintenance of addiction could never be "in the course of the physicians' medical practice" since it did not have cure as its object.¹¹ *United States v. Behrman* went even further and held that prescribing drugs for addicts opened the physician to liability, regardless of intent.¹²

The physicians' right to prescribe was eliminated by the Court's decisions in *Webb* and *Behrman*. Public perceptions of heroin use also changed. The problem became one of controlling crime. Use of heroin for other purposes was ignored. In 1920 the House of Delegates of the American Medical Association adopted a resolution to eliminate its use and sale.¹³ Further, in 1924 Congress

⁹T. Quinn and G. McLaughlin, "The Evolution of Federal Drug Control Legislation," 22 *Catholic University Law Review* 593 (1973).

¹⁰*Harrison Narcotics Act*, Ch. 1, § 2(a), 38 Stat. 785 at 786 (1914).

¹¹*Webb v. United States*, 249 U.S. 95, (1918).

¹²*United States v. Behrman*, 258 U.S. 280, (1922). As a result, addicts had to turn to an illicit source of supply.

¹³*Bulletin on Narcotics* 5 at 3.

passed a law prohibiting the importation of any crude opium for the purpose of manufacturing heroin.¹⁴

Testimony given at a hearing before the House Committee on Ways and Means prior to passage of the 1924 bill captures the outlook of the times:

* * *

"The question of heroin habituation and its production yearly of enormous numbers of new criminals is one of the most important moral questions that is up before the American Government at the present time."¹⁵

* * *

The testimony presented at the 1924 Hearings as to the addiction and criminal elements of heroin usage fills many pages. The brief testimony regarding medical use is quickly dismissed with inferences characterizing its source as profit-oriented.¹⁶

From 1924 through the 1960's our narcotics policy changed little—the few changes directed towards greater law enforcement, increasing the focus on illegality.

In 1970 the "Comprehensive Drug Abuse Prevention and Control Act" was passed by Congress.¹⁷ This Act

¹⁴U.S. Treasury Department, Bureau of Narcotics, Reg. no. 2 relating to Importation of Opium or Coco leaves . . . Under the Act of May 26, 1922 as amended by Act of June 7, 1924, U.S. Government Printing Office, Washington, D.C. 1938.

¹⁵Hearings before a Subcommittee of the House Committee on Ways and Means on H.R. 7079, 68th Cong., 1st Sess., 1924.

¹⁶Dr. Charles Richardson, Executive Committee of Board of Trustees of A.M.A., *Prepared Statement to H.R. 7079*, 68th Cong., 1st Sess., 1924.

¹⁷Act of October 27, 1970, Pub.L.No. 91-513.

repealed most prior drug legislation, including the Harrison Narcotics Act, and incorporated into one statute a comprehensive scheme to deal with general drug enforcement. The objective of the bill, stated during the hearings held on the bill, was "... to provide meaningful enforcement and penalty controls over the narcotics and dangerous drug problem that is with us now and will probably be with us in the future."¹⁸

Title II of the 1970 Act, the so-called "Controlled Substances Act" is the primary Federal law for the domestic control of dangerous substances. The central features of the Controlled Substances Act are the following:

* * *

"(1) establishment of five separate schedules and the classification of all controlled substances therein, with the extent of regulation of each substance varying according to its schedule;

"(2) transfer to the Secretary of Health, Education and Welfare of authority to designate the classification of substances proposed to be regulated under the Act, in the absence of control required by treaty in effect upon enactment;

"(3) extension of previously existing licensing requirements for narcotics manufacturers to apply to manufacturers of all controlled drugs and to all distributors of such drugs."

* * *

The schedules established by the "Controlled Substances Act" are based on the degree of abuse potential,

¹⁸John Ingersoll, Director, Bureau of Narcotics and Dangerous Drugs, Prepared Statement of Administration Witnesses on H.R. 17463, Committee on Ways and Means, H.R. Doc. No. 782, 91st Cong., 2d Sess. 15 (1970), 15.

known effect, harmfulness and level of accepted medical use.¹⁹

Heroin is classified as a Schedule I drug.²⁰ The properties of Schedule I drugs are identified in the Act as follows:

1. The drug or other substance has a high potential for abuse.
2. The drug or other substance has no currently accepted medical use in treatment in the United States.
3. There is a lack of accepted safety for use of the drug or other substance under medical supervision.

The fact that the drugs in Schedule I are labelled as having "no current accepted medical use" severely restricts their use to experimental research which is regulated under an application for research to HEW.

Legitimate, recognized medical use is accorded heroin's sister opiate, morphine, which is classified as a Schedule II drug. Although both drugs are recognized as having a high potential for abuse, morphine may be prescribed by physicians for medical use.²¹

¹⁹*Controlled Substances Act*, 21 U.S.C. § 801, Title II, § 201-202.

²⁰Schedule I is the most restricted category. The sole purpose for manufacture of Schedule I drugs lies in research—not clinical medicine. F. Streit, Mark Nicolich and Michael Backenheimir, *Purchase Predictions of Schedule II Drugs Under the CSA of 1970, 1977-1981*, Office of Division of National Institute of Drug Abuse (1977).

²¹In *United States v. Moore*, the Supreme Court held that the Controlled Substances Act implicitly limits the physician's dispensing authority to the course of his professional practice. 423 U.S. 122 (1975).

The basis for assigning heroin to Schedule I is stated as follows: "These drugs are those which by law or regulation have been placed under control under existing law."²² Thus history, rather than logic, provided the basis for keeping heroin in its illegitimate status.²³ Today, the situation remains unchanged, despite an impressive amount of research and experience to the effect that heroin can serve as an effective and unique analgesic in the control of severe pain, particularly that which is experienced in the final stages of cancer.²⁴

THE BRITISH EXPERIENCE

The use of heroin in Britain has differed markedly from that in the United States and provides a model for stimulating change to allow the medical prescription of heroin for limited purposes in this country.

Britain also enacted legislation in response to the Hague Convention. The intent of the Dangerous Drugs Act of 1920 was very similar to that of the Harrison Narcotics Act, *i.e.*, to restrict the distribution of opiates to the medical profession.²⁵ But the laws in these two countries were thereafter developed in a radically dif-

²²Pub.L.No. 91-513, 21 U.S.C. § 801, reprinted in 91512 *Cong. and Admin. News*, LEGISLATIVE HISTORY OF THE CONTROLLED SUBSTANCES ACT, 1970, at 4569 (1970).

²³Interview with Ed. Tocus, Ph.D., Food and Drug Administration, in Washington, D.C. (March 7, 1979).

²⁴"Will Heroin Eventually See the Light of Day for Treating Chronic Pain?" *JAMA* 240, 15 (October 6, 1978).

²⁵Norman Zinberg and J. Robertson, *Drugs and the Public*, (New York: Simon and Schuster, 1972), 21. This Act made it a crime to import, export, manufacture, supply or possess without a license, opiates, cocaine or cannabis.

ferent manner: the U.S. concentrated on restrictions, while Britain adopted a thoughtful medical approach.²⁶

When conflict arose in the United Kingdom over the legality of giving drugs to addicts, a committee was formed in 1926 to resolve the issue; the committee was chaired by Sir Humphrey Rolleston, a prominent physician. The recommendations of the Rolleston committee formed the basis of British drug policy for 40 years:

* * *

"1. doctors should be allowed to prescribe narcotics to wean patients off drugs;

"2. to relieve pain after a prolonged cure has failed; and

"3. in cases where small doses enabled otherwise helpless patients to perform useful tasks and lead relatively normal lives."²⁷

* * *

These recommendations had the effect of leaving the control of the problem with the physician and steered it away from the police and a law enforcement model.

In the 1960's, Britain experienced a great upsurge in drug addiction. The most intractable drug problems were perceived to be caused by LSD and amphetamines. Public policy changed. The medical approach was retained but: (1) modifications over prescribing to addicts were introduced; (2) addicts were registered by a central authority, the Home Office; (3) disciplinary rules were

²⁶J. Barbara and J. Morrison, "If Addiction Is Incurable, Why Do We Try To Cure It? A Comparison of Control Methods in the United Kingdom and United States" in *Crime and Delinquency*, 29 (January 1975).

²⁷E. May, "Narcotics Addiction and Control in Great Britain," in *Dealing with Drug Abuse* 350 (1972).

provided for doctors who violated the restrictions; and (4) mandatory licensing was introduced relative to scheduled drugs. The 1967 Dangerous Drug Act incorporated these recommendations into statute.²⁸

In 1971, the Misuse of Drugs Bill granted new powers to the Government and departed in several significant ways from the old structure in that the Government was given power to add or take away drugs in any class.²⁹

This greater responsibility of the Government and the increased ability for enforcement has led to a more structured system and has contained the rise in addiction experienced in the 1960's without resort to absolute prohibition of drugs like heroin which is valued for certain legitimate uses.

The histories of heroin in the United States and in Britain differ radically. The law enforcement model which has existed in the United States during most of the span of heroin history has precluded any consideration of medical use, probably out of fear of abuse as well as ignorance of its medical properties.³⁰ This has not been the case in Britain where heroin has long enjoyed an acceptance for medical use.

MEDICAL RESEARCH

In spite of the fact that heroin (diamorphine), has been available in the United States since the late nineteenth century there have been relatively few reported studies of

²⁸ Zinberg at 128.

²⁹ *Misuse of Drugs Act*, 1971, 41 Halsbury's Laws of England, c. 38 (1971).

³⁰ In contrast to heroin, morphine has long enjoyed an acceptance for medical use.

its general medical use and fewer still of its effect as an analgesic when administered over a long period of time to patients with chronic pain. Those few studies have been regarded as inconclusive by some segments of the medical profession and government officials.³¹ Opponents of heroin use feel that morphine is as effective as heroin and, further, that a "new drug" is not what is needed but, rather, better education of physicians in the treatment of chronic pain problems.³² A review of the chemical structure of heroin and the recent studies themselves provide a basis from which to examine the controversy.

³¹The Medical News Section of the October 6, 1978 issue of *JAMA* p. 1570 reports that in June of 1978 the American Medical Association's House of Delegates refused to endorse the idea of making heroin available in specific cases. In the same issue p. 1601 John R. Lewis, Ph.D. of the AMA concludes that available scientific evidence indicates that heroin has no advantage over morphine yet he excludes Twycross' finding on the solubility of heroin. While citing the negative result that morphine is a satisfying substitute for orally administered diamorphine Lewis totally ignores the final statement of the study—"... [w]hen injections are necessary, the greater solubility of its hydrochloride gives diamorphine an important practical advantage over morphine . . ." in Robert G. Twycross, "choice of strong Analgesic in Terminal Cancer: Diamorphine or Morphine?", *Pain* 3 (1977) 93-104, 104. Seymour Perry, M.D., associate director for medical applications of Research at National Institutes of Health, stated in an interview that not all the facts are in. Jane E. Henney, M.D., National Cancer Institute, indicated in a phone conversation that there is likely to be little difference between morphine and heroin. She interpreted the Twycross findings as inconclusive in regard to heroin use for terminal pain of cancer patients.

³²John R. Lewis, "Should Heroin Be Available To Treat Severe Pain," *JAMA* 240 (Oct. 1978) 1601-1602. Brian J. Lewis, M.D. and Vincent T. DeVita, Jr., M.D., "Is There a Place for Heroin in the Symptomatic Support of Cancer Patients?", *Paper*, Bethesda, Maryland, National Cancer Institute, December, 1977.

Heroin is a derivative of morphine which itself is an alkaloid of opium of the phenanthrene type.³³ Heroin is formed by adding two molecules of acetic acid to the basic morphine radical.³⁴ The effects of heroin are due to its depressant action on the central nervous system, resulting in "an increased tolerance to pain, a sleepy feeling, a lessened perception to external stimuli and a feeling of well-being."³⁵ This action appears to be caused as the heroin is broken down by the body into a hydrolyzed form of heroin,³⁶ and later into morphine.³⁷

This process of decomposition occurs more rapidly when heroin passes through the digestive system due to the high level of hydrolytic activity in the liver.³⁸ In contrast, the brain has a relatively low level of hydrolytic activity. The greater lipid solubility of heroin³⁹ makes

³³Elsie E. Krug, *Pharmacology in Nursing*, (St. Louis, C.V. Mosby Company, 1960), 188.

³⁴Robert G. Twycross, D.M. Speech presented to the National Committee on the Treatment of Intractable Pain, Washington, D.C., January 31, 1978.

³⁵Robert E. Willette, Ph.D., "Analgesic Agents," in *Textbook of Organic Medicinal and Pharmaceutical Chemistry*, ed. Charles O. Wilson, Ole Gisvold and Robert F. Doerge, 7th ed. (Philadelphia: J.P. Lippincott Co. 1977), p. 672.

³⁶Monoacetyl morphine is the substance which results from the first stage of breakdown.

³⁷E. Leong Way, Joseph Young, and John W. Kemp, "Metabolism of Heroin and Its Pharmacologic Implications." *Bulletin on Narcotics* 17 (January-March 1965): 25-33.

³⁸Udo Boerner, "The Metabolism of Morphine and Heroin in Man," in *Drug Metabolism Reviews*, ed. Frederick J. DiCarlo (New York: Marcel Dekker Inc., 1975, 99-73. See also Brian J. Lewis, M.D. and Vincent T. DeVita, Jr., M.D., "Is There a Place for Heroin in the Symptomatic Support of Cancer Patients?," *Paper*, Bethesda, Maryland, National Cancer Institute, December, 1977, 8.

³⁹Udo Boerner, "The Metabolism of Morphine and Heroin in Man," in *Drug Metabolism Reviews*, ed. Frederick J. DiCarlo (New York: Marcel Dekker Inc., 1975) 63.

possible an easy passage through the blood brain barrier.⁴⁰ Thus, different central effects from those seen after morphine administration may be demonstrated.⁴¹ Although heroin given orally does not have effects different from those of morphine, when given intravenously it has been shown to give more rapid pain relief.⁴²

The studies which are most pertinent to heroin's use for terminal patients are those done in Britain by Doctor Robert Twycross, M.D. Using the terminal patients of Saint Christopher's hospice as subjects, Twycross has come to some surprising conclusions in light of popularly-held American beliefs concerning heroin.

⁴⁰*Ibid.*, p. 63.

⁴¹Lewis and DeVita, "Is There a Place for Heroin in the Symptomatic Support of Cancer Patients?", 8.

⁴²M.E. Scott and Rosemary Orr, "Effects of Diamorphine, Methadone, Morphine, and Pentazocine in Patients with Suspected Actual Myocardial Infarction," *Lancet* 1 (May 1969): 1065-1067. But in a study of 522 patients with post operative wound pain it was found that during the first 150 minutes after injection heroin is approximately two to four times as potent as morphine for the relief of steady incisional pain. Claus W. Reichle, Gene M. Smith, Joachim S. Graverskin, Spyros Macius and Henry K. Beecher, "Comparative Analgesic Potency of Heroin and Morphine in Post-operative Patients," *Journal of Pharmacology and Experimental Therapeutics* 136 (April 1962): 43-46. See also J.W. Dundee, R.S., J. Clarke and W.B. Loan, "Comparative Toxicity of Diamorphine, Morphine and Methadone," *Lancet* (July 29, 1967): 221-223. The authors do not find that heroin has a clear-cut advantage over morphine in spite of heroin's early onset of action and a slight decrease in emesis (nausea and vomiting). It is important to note here that the study involved only one injection. The results in the case of long term use might be different as the authors themselves suggest.

In a review of five hundred cancer patients, about 80% of whom received heroin at one time during their stay, and 15% of whom received heroin predominantly or exclusively by injection, Twycross found: (1) the prescription of heroin does not, by itself, lead to impairment of mental faculties; (2) tolerance is not a practical problem; (3) psychological dependence does not occur; and (4) although physical dependence may develop, it appears not to prevent the downward adjustment of the dose of heroin when considered clinically feasible.⁴³

A further Twycross study with one hundred fifteen patients demonstrated that an increase in dose was made necessary by an increase in pain, not by an increase in tolerance.⁴⁴ The evidence supports the thesis that heroin is much safer in clinical practice than earlier believed.⁴⁵ Not only is heroin safe to use in the treatment of cancer patients but when injections are necessary the greater solubility of its hydrochloride gives heroin an important practical advantage over morphine.⁴⁶

Other studies have found heroin not to be superior to morphine in the treatment of pain. The variables in these conflicting studies include: (1) the age of the heroin solution (heroin is an unstable solution, breaking down

⁴³Robert G. Twycross, D.M., "Clinical Experience with Diamorphine in Advanced Malignant Disease," *International Journal of Clinical Pharmacology, Therapy and Toxicology* 9 (3) (1974): 184-198, 184.

⁴⁴Robert G. Twycross and Shari Wald, "Long Term Use of Diamorphine in Advanced Cancer," *Advances in Pain and Research Therapy* 1 (1976): 661.

⁴⁵*Ibid.*; 661.

⁴⁶Robert G. Twycross, "Choice of Strong Analgesic in Terminal Cancer: Diamorphine or Morphine?," *Pain* 3 (1977), 93.

over time to morphine);⁴⁷ (2) the population involved in the study (age and condition of the subject); (3) the type of pain (chronic or acute); (4) how the pain was quantified; (5) and the application of the conclusion (using results of a study with healthy volunteers to reach conclusions about the chronically ill).⁴⁸

Perhaps an even more important variable in pain tolerance is the ever-changing internal and external environment of the individual patient. As a recent article noted: "pain is a subjective emotional experience and patient reaction to it varies tremendously from person to person and even in the same person from time to time."⁴⁹ Further, the patient's response to a drug will depend to a great extent on the circumstances under which the medication is administered. For example, a narcotic given in the absence of pain may produce discomfort and apprehension while that same narcotic given in the presence of severe pain may produce sedation and euphoria.⁵⁰

Studies are presently being conducted at Sloan Kettering Institute in New York and at Georgetown University Hospital in Washington, D.C. to answer the questions of how heroin moves through the body, what the potency ratio of heroin is to morphine, which drug (heroin or

⁴⁷ Robert G. Twycross, "Stumbling Blocks in the Study of Diamorphine," *Post Graduate Medical Journal* 49 (1973) 313.

⁴⁸ Lewis and DeVita, "Is There a Place for Heroin in the Symptomatic Support of Cancer Patients?" p. 5, 6, 8.

⁴⁹ Robert B. Catalano, "The Medical Approach to Management of Pain Caused by Cancer," *Seminars in Oncology* 2 (477) (December 1975) 380.

⁵⁰ *Ibid.*, p. 386.

morphine) is the best pain reliever and which has fewer side effects.⁵¹

At Sloan Kettering, the studies are performed on post operative patients using heroin administered intravenously and orally. A double blind, crossover study ("double blind" indicates that neither doctor nor patient know which drug is being given; "crossover" indicates that the same patient will receive both drugs) performed with a population of post-surgical patients will compare heroin given intramuscularly with morphine given by the same route. At Georgetown, the same type of empirical study for potency will be made but with a population of cancer patients.

Many believe that heroin is the drug of choice when injections are necessary. That choice is dictated by the greater solubility of heroin.⁵² An example will clarify this point. If a patient must receive two tenths of a millileter of heroin, a very small injection, to provide pain relief, a patient receiving morphine would require eight milliliters, a large injection, to obtain the same amount of relief.⁵³ The smaller injection is much less painful for a patient whose body may be quite emaciated due to disease. For the approximately 15%⁵⁴ of terminal

⁵¹"Heroin," *Paper on its current status prepared by the Inter-agency Committee on New Therapies for Pain and Discomfort*, Bethesda, Maryland, March 8, 1977.

⁵²Robert Twycross, "Choice of Strong Analgesic in Terminal Cancer: Diamorphine or Morphine?," p. 93.

⁵³*Idem*, "Studies on the Use of Diamorphine in Advanced Malignant Disease," *Dissertation for Degree of Doctor of Medicine*, University of Oxford, St. Peter's College, Oxford (May 1976) Table 44.

⁵⁴*Idem*, "Clinical Experience with Diamorphine in Advanced Clinical Disease," p. 184.

cancer patients who require injections this is an important consideration. Twycross concluded in 1976 that "[h]eroin is an essential drug for terminal cancer care."⁵⁵ While not a panacea for terminal cancer, heroin is a useful drug in the management of advanced cancer pain.⁵⁶

SECURITY

Heroin is one of the most abused drugs.⁵⁷ Illicit channels of heroin prove a major problem for law enforcement at all levels of government. However, the problem of maintaining licit channels in heroin and minimizing the potential for misuse can be met through adequate regulations. The closed system developed to secure methadone, also a frequently abused drug, is a good example.

According to the Controlled Substances Act, methadone is a Schedule II drug.⁵⁸ The drug has a high potential for abuse, yet is seen to play an effective part in certain medical treatments such as the treatment of narcotic addiction. Methadone may also be prescribed as an analgesic for non-addicts, subject to constraints imposed by agencies of the federal government.

To ensure that methadone will be limited to authorized treatment, the Food and Drug Administration and the Drug Enforcement Agency of the Justice Department have agreed upon acceptable criteria and guidelines for

⁵⁵ *Idem*, "Studies on the Use of Diamorphine in Advanced Malignant Disease," *DM dissertation*, Chapter 10, p. 89.

⁵⁶ *Ibid.*, p. 86.

⁵⁷ A leading cause of death among teenagers in metropolitan areas is overdose of heroin according to *House Report 91-1444*, accompanying P.L. 91-513.

⁵⁸ *Controlled Substances Act*, § 202, 21 U.S.C. § 812 (1970).

control.⁵⁹ These criteria and guidelines cover the manner in which a distribution system must be structured, the proper storage of the drug, the persons within the system who must register with the FDA and the DEA, the responsibilities of the personnel and the sanctions for failure to comply with the regulations.⁶⁰ These strictures place methadone within a special class of Schedule II drugs. It is seen as a new drug approved for use and yet, still quite dangerous in an uncontrolled environment and requiring substantial security precautions.⁶¹

The requirements of registration and reporting of methadone use make it possible to trace the path of the drug from the manufacturer to the patient. Thus it is possible to account for each change in possession and, hopefully, to eliminate diversion of the drug from its proper use. Similar controls can be devised for heroin.

CONCLUSION

It has been shown that concern for addiction problems led to the development of a negative attitude toward heroin in the United States with a resultant decrease in medical research efforts. It has also been demonstrated that in recent years there has been a shift in attitude

⁵⁹The criteria are set out in 21 C.F.R. § 291.505 (1978).

⁶⁰*Id.* Further criteria are set out for security of drug stocks in 21 C.F.R. § 1301.72-1301.76 (1978). These are requirements and prescribed by DEA.

⁶¹21 C.F.R. § 310.304(b) (1978). The Commissioner of FDA concludes that it is in the public interest to utilize the IND (investigational new drug) and NDA (new drug approval) control mechanisms to ensure close control over distribution, administration and dispersing of the drug and to detail the responsibilities for such control.

among some segments of the population. One example is the renewed interest in research into heroin's medical benefits; another is the emerging interest of state legislatures favoring the use of heroin for the terminally-ill cancer patient.⁶²

While it is true that research in this country is not complete, there is strong data from England which establishes the safety and effectiveness of heroin when used for the terminally-ill cancer patient. It has been suggested that this is not enough, that we must wait until further research in the United States is complete. This view assumes that science is capable of answering all questions.⁶³ It is also a way of putting off a difficult policy decision.

A closer look at the problem should reveal a far easier task than imagined. The drug in question, heroin, is safe to use for terminal cancer patients. There is a danger of addiction but that should not be an overriding concern with this class of patients. Adequate security precautions can be devised to ensure that the drug is not diverted into illicit channels or irresponsibly prescribed.

⁶²*Hawaii*: A resolution has been adopted by the State Senate requesting the Attorney General of the United States to allow use of heroin for medical purposes.

New York: A bill has been introduced in both houses of the State legislature to permit the administration of heroin to terminally-ill patients.

Oregon: A bill was introduced in the State Senate to establish a controlled substances therapeutic research program.

Michigan (Wayne County): A resolution recommending that physicians be allowed to use heroin and marijuana in the treatment of dying patients has been approved by the Michigan Board of Commissioners.

⁶³Zinberg at 87.

The argument that heroin is not the *most* effective drug for the majority has no place here. No single drug or procedure is always or almost always best for every patient.⁶⁴ Therefore all safe drugs should be a part of the physician's armamentarium, to be drawn upon when needed.

In light of the useful potential of heroin for terminally-ill cancer patients as illustrated by medical research and in light of the feasibility of security precautions it is the position of the National Committee on the Treatment of Intractable Pain that heroin be moved to Schedule II of the CSA to allow its use strictly for the treatment of terminal cancer patients under controlled circumstances.

LEGISLATIVE PROPOSAL

The following outlines the basic elements of a bill providing for the use of heroin for terminally-ill cancer patients:

I. RESCHEDULE HEROIN

Heroin should be rescheduled as a Schedule II controlled substance under tight security controls. Heroin's potential as a safe and effective analgesic for many terminally-ill cancer patients warrants the change.

⁶⁴Robert B. Catalano, "The Medical Approach to Management of Pain Caused by Cancer," *Seminars in Oncology* 2 (477) (December 1975) p. 388.

II. SECURITY MEASURES

A. Use of heroin should be confined to the treatment of pain experienced by the terminally-ill cancer patient.⁶⁵ The duration of the treatment would be short. Such an approach would also limit substantially the problem of diversion from the patient to outsiders—the cancer patient will not be ambulatory outside the treatment area.

B. The use of heroin generally should be confined to the hospital setting. No physician should keep heroin in his office. No patient should be given heroin outside the hospital except in the very final stages of life. The confinement of the drug to the hospital location shortens the distribution chain, thus strengthening security.

C. A diagnosis of terminal cancer must be made by the patient's attending physician, attested to by a board-certified or eligible oncologist under procedures supervised by a medical review board of the hospital. This would ensure that only terminal cancer patients will receive heroin.

⁶⁵The criteria utilized here for determining whether a patient is terminal was developed by Robert S. K. Young, M.D., a physician with the Food and Drug Administration. See *United States of America, et al. v. Glen L. Rutherford, et al.*, U.S. Sup. Ct. Docket No. 78-605, Oct. '78, Dist. Ct. R. 210-211, 309-310, 315-316, 331-334.

A BILL

To amend the Controlled Substances Act to authorize the medical prescription of heroin in situations limited to the treatment of pain experienced by terminal cancer patients under controlled circumstances.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

SECTION 1. FINDINGS AND DECLARATIONS

(a) Cancer strikes millions of Americans, many of whom experience intractable pain in the final stages of their illness;

(b) Heroin is recognized as a unique and potent analgesic which can relieve the pain of many terminally-ill cancer patients;

(c) Although other narcotics are currently available for the treatment of cancer pain, in certain situations heroin is the narcotic of medical choice.

(d) Other nations permit the controlled use of heroin for medical and scientific purposes;

(e) Recognition of heroin abuse potential dictates stringent regulatory measures applicable to any medicinal use; and

(f) Safeguards can be designed to control the manufacture, storage, distribution and prescription of heroin to ensure that it is not diverted into illicit channels.

**SECTION 2. AUTHORIZING THE MEDICAL
PRESCRIPTION OF HEROIN FOR
TERMINAL CANCER PATIENTS**

(a) Section 202, Schedule I(b) of the Controlled Substances Act is amended as follows:

- (i) delete "(10) Heroin;" and
- (ii) renumber sections "(11)" through "(22)" thereof as sections "(10)" through "(21)" consecutively

(b) Section 202, Schedule II(b) of the Controlled Substances Act is amended by adding at the end thereof: "(22) Heroin"

SECTION 3. LIMITATIONS ON THE PRESCRIPTION OF HEROIN

Part C of the Controlled Substances Act is amended by adding at the end thereof a new section as follows: "§ 310. Security and Regulations for Heroin Use.

- (a) "Administration of heroin to terminally-ill cancer patients is limited to hospital use;
- (b) "Diagnosis of the terminal stage of the patient's illness shall be made by the patient's attending physician prior to any administration of heroin.
- (c) "Attestation of the diagnosis by a board-certified or eligible oncologist shall be a prerequisite for any administration of heroin;
- (d) "Review of the diagnosis and attestation shall be conducted under procedures supervised by a medical review board of the hospital.
- (e) "For these purposes, the criteria for determining whether a patient is 'terminal' are as follows:

"(1) There must be histologic evidence of a malignancy in the patient; and

"(2) The malignancy must be characterized as a disease with a high and predictable mortality; and

"(3) The malignancy must be rapidly progressive so as to result in death in a relatively short period of time, i.e., within a few weeks or within a few months; and

"(4) There must be no treatment recognized by experts as safe and effective for the disease, or therapies recognized as safe and effective for the disease have been exhausted, and further treatment would not be reasonably expected to benefit the patient."

SECTION 4. REGULATIONS

Within six months from date of enactment, the Attorney General in coordination with the Secretary of Health, Education and Welfare is directed to promulgate regulations consistent with public health and safety and which are in accord with the provisions of this bill to ensure proper safeguards regarding the manufacture, storage, distribution and prescription of heroin so as to prohibit its diversion into illicit channels.

SECTION 5. EFFECTIVE DATE

This Act shall take effect nine months from date of enactment.

APPENDIX

1a

ANALYTICAL BIBLIOGRAPHY

HISTORY

- Baumgartner, Kenneth and Morrell, Michael. "Pharmaceutical Industry Regulation by the Department of Justice." 23 *Syracuse Law Review* No. 3 (1972) 785-813.
- Brouet, Georges. "The Use of Heroin in Therapeutics." *Bulletin on Narcotics* 5(2) (1953): 17.
- Bayer, Ronald. "Liberal Opinion and the Problem of Heroin Addiction." *Contemporary Drug* 4 (1975): 93.
- Brown, Roger, "Federal Drug Control Laws: Present and Future," 8 *Federal Law Review* 435 (1977).
- "History of Heroin." *Bulletin on Narcotics* 5 (April-June, 1953): 3-16.
- Henteleff, Thomas O. "Legal Developments Relating to Controlled Drugs." *Food Drug Cosmetics L. J.* 31, 8 (1976): 465-472.
- Hunt, Leon Gibson and Chambers, Carl. *The Heroin Epidemics. A Study of Heroin Use in the United States, 1965-1975* Halsted Press: N.Y., 1976.
- Kaplan, John. "A Primer on Heroin," 27 *Stanford L. R.* 801 (1975).
- "Methadone Primer." *Federal Probation* (September 1971): 50-51.
- Musto, David. *The American Disease: Origin of Narcotics Control*. New Haven: Yale University Press, 1973.
- Musto, David F. "Early History of Heroin in the United States" in *Addiction*, pp. 175-185; edited by Peter G. Bourne. New York: Academic Press, 1974.

Preston, William. "How We Became Addicted to Drug Control: *Civil Liberties Review* 4 (July-August 1977): 68-72.

Quinn, Thomas M. and McLaughlin, Gerald T. "The Evolution of Federal Drug Control Legislation." 22 *Catholic University Law Review* 586 (1973).

Rosthal, Robert. "The Administrative Procedure Act," *Drug Enforcement* § 78, 31-41.

Schur, Edwin. *Narcotics Addiction in Britain and America*. Bloomington, Indiana: Indiana University Press, 1962.

U.S. Department of Health, Education and Welfare. Public Health Service. National Institute on Drug Abuse. *Heroin Indicators Trend Report*, July, 1976.

LEGISLATIVE MATERIALS

Harrison Act of 1914, 38 Stat. 785, 1914.

Hearings on Methadone Use and Abuse, Senate Committee on the Judiciary. Subcommittee of Investigative Juvenile Delinquency. 92d Congress, 2nd Session and 93d, first session (1972-1973).

International Narcotic Community, A Report on the 27th Session of the U.N. Committee on Narcotic Drugs, Select Committee on Narcotic Abuse and Control, 95th Cong., 1st Sess. (1977).

Legislation To Regulate Controlled Dangerous Substances and To Amend Narcotics and Drug Laws, Committee on Ways and Means, 91st Cong., 2d Sess. 25 (1970).

Prepared Statements of Administration Witnesses, Committee on Ways and Means, H.R. Doc. No. 782, 91st Cong., 2d Sess. 15 (1970).

Select Committee on Narcotic Abuse and Control, Considerations For and Against the Reduction of Federal Penalties for Possession of Small Amounts of Marijuana for Personal Use, H.R. Doc. No. 962, 95th Cong., 1st Sess. 17 (1977).

"Senate Hearings on Opium Control Announced by Bayh," Narcotic Control Digest, February 12, 1975.

Subcommittee To Investigate Juvenile Delinquency, Committee on Judiciary, 95th Cong., 1st Sess., Juvenile Delinquency Annual Report (1978).

Summary of Recommendations on H.R. 17462: A Bill To Regulate Controlled Dangerous Substances, Staff of Joint Committee on International Revenue Taxation, Ways and Means Committee, J. No. 862, 91st Cong. (1970).

Summary of Testimony and Findings and Conclusions: Oversight Hearings on H.R. 962 Before the Select Committee on Narcotics Abuse and Control, 95th Cong., 1st Sess. (1977).

Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970, Controlled Substances Act, Schedule of Controlled Substances, 21 C.F.R. § 1308.01-1308.51 (1978).

U.S. Congress, House Committee on Interstate and Foreign Commerce. Drug Abuse Office and Treatment Amendment of 1978. Hearing Before a Subcommittee of the House Committee on Interstate and Foreign Commerce on H.R. 11160, 95th Cong., 2d Sess., 1978.

U.S. Congress, House Committee on Ways and Means. Prohibiting the Importation of Opium for the Manufacture of Heroin. Hearings Before a Subcommittee of the House Committee on Ways and Means on H.R. 7079, 68th Cong., 1st Sess., 1924.

U.S. Congress, Senate Committee on Human Resources. *Drug Abuse Office, Prevention and Treatment Amendment of 1978. Hearing Before a Subcommittee of the Senate Committee on Human Resources on S. 2916, 95th Cong., 2d Sess., 1978.*

U.S. Congress, Senate Committee on the Judiciary. *A Bill To Protect the Public Health and Safety by Amending the Narcotic Depressant, Stimulant and Hallucinogenic Drug Laws, and for Other Purposes. Hearings Before a Subcommittee of the Senate Committee on the Judiciary on S. 2637, 91st Cong., 1st Sess., 1969.*

U.S. Congress, Senate Committee on the Judiciary. *A Bill To Reorganize and Coordinate Control of the Narcotic and Drug Abuse Laws Under the Bureau of Narcotics and Dangerous Drugs, Department of Justice. Hearings Before a Subcommittee of the Senate Committee on the Judiciary on S. 1895, 91st Cong., 1st Sess., 1969.*

U.S. Congress, Senate Committee on the Judiciary. *Investigation of Juvenile Delinquency in the U.S. Hearings Before a Subcommittee of the Senate Committee on the Judiciary Pursuant to S.Re. S.48, 91st Cong., 1st Sess., 1969.*

MEDICAL RESEARCH

Boerner, Udo. "The Metabolism of Morphine and Heroin in Man" in *Drug Metabolism Reviews*, pp. 39-73. Edited by Frederick DiCarlo. New York: Marcel Dekker Inc., 1975.

Bonica, J.J. "Introduction to Symposium on Pain." *Archives of Surgery* 112 (1977): 749.

Catalano, Robert B. "The Medical Approach to Management of Pain Caused by Cancer." *Seminars on Oncology* 2 (December, 1975):

- Dundee, J.W.; Clarke, R.S.J.; and Loan, W.B. "Comparative Toxicity of Diamorphine, Morphine and Methadone." *The Lancet* 2 (July 29, 1967): 221-224.
- Eddy, N.B., Halbach, H., and Braendon, O.J. "Synthetic Substances with Morphine-Like Effect." *Bulletin WHO* 17 (1957): 585-593.
- Eddy, Nathan B. and May, Everette L. "The Search for a Better Analgesic." *Science* 181 (August 3, 1973): 407-14.
- Goodman, L.S. and Gilman, A. *The Pharmacological Basis of Therapeutics* 5th ed. New York: Macmillan (1975).
- "Heroin." *Paper* on heroin's current status prepared by the Interagency Committee on New Therapies for Pain and Discomfort, Bethesda, Maryland, March 8, 1977.
- Krug, Elsie E. *Pharmacology in Nursing*. St. Louis: C.V. Mosby Company, 1960.
- Lasagna, L. "The Clinical Evaluation of Morphine and Its Substitutes as Analgesic: *Pharmacological Review* (March 1964): 47-83.
- Lasagna, L.; von Felsinger, J.M., and Beecher, H.K. "Drug-Induced Mood Changes in Man. Observations on Healthy Subjects, Chronically Ill Patients and Post-Addicts." *JAMA* 157 (1955): 1006-1020.
- Lewis, Brian J. and DeVita, Vincent T., Jr. "Is There a Place for Heroin in the Symptomatic Support of Cancer Patients?" *Paper*, Bethesda, Maryland. National Cancer Institute. December 1977.
- Lewis, John R. "Should Heroin Be Available To Treat Severe Pain?" *Journal of the American Medical Association* 240 (Oct. 6, 1978): 1601-02.

- Marks, Richard M. and Sachar, Edward J. "Undertreatment of Medical Inpatients with Narcotic Analgesics." *Annals of Internal Medicine* 78 (February 1973): 173-181.
- Reichle, L.W.; Smith, G.M.; Gravenstein, J.S.; Macris, S.G.; and Beecher, H.K. "Comparative Analgesic Potency of Heroin and Morphine in Postoperative Patients." *Journal of Pharmacology and Experimental Therapeutics* 136 (1962): 43.
- Scott, M.E. and Orr, Rosemary. "Effects of Diamorphine, Methadone, Morphine and Pentazocine in Patients with Suspected Acute Myocardial Infarction." *The Lancet* 1 (May 1969): 1065-1067.
- Seevers, M.H. and Pfeiffer, C.C. "A Study of Analgesic Subjective Depression and Euphoria Produced by Heroin, Dilaudid and Codeine in the Normal Human Subject." *Journal of Pharmacology and Experimental Therapeutics* 56 (1936): 166-187.
- Smith, G.M. and Beecher, H.K. "Subjective Effects of Heroin and Morphine in Normal Subjects. *Journal of Pharmacology and Experimental Therapeutics* 136 (1962): 47-52.
- Smith, G.M.; Semke, G.W.; and Beecher, H.K. "Objective Evidence of Mental Effects of Heroin, Morphine and Placebo on Normal Subjects." *Journal of Pharmacology and Experimental Therapeutics* 136 (1962): 53-58.
- Twycross, Robert G. "The Alimentary Absorption of Diamorphine and Morphine in Man as Indicated by Urinary Excretion Studies." *British Journal of Clinical Pharmacology* 1 (1974): 491-494.
- Twycross, Robert G. "Clinical Experience with Diamorphine in Advanced Malignant Disease." *International Journal of Clinical Pharmacology, Therapy and Toxicology* 9 (1974): 184-198.

- Twycross, Robert G. "Choice of Strong Analgesic in Terminal Cancer. Diamorphine or Morphine?" *Pain* 3 (1977): 93-104.
- Twycross, Robert G. "Diseases of the Central Nervous System." *British Medical Journal* 4 (October 1975): 212-214.
- Twycross, Robert G. "Long Term Use of Diamorphine in Advanced Cancer." *Advances in Pain and Research Therapy* 1 (1976): 653-661.
- Twycross, Robert G. "Studies on the Use of Diamorphine in Advanced Malignant Diseases. D.M. dissertation, University of Oxford, May 1976.
- Twycross, Robert G. "Stumbling Blocks in the Study of Diamorphine." *Postgrad Med* 49 (May 1973): 304-313.
- Twycross, Robert G. "The Use of Narcotic Analgesics in Terminal Illness." *Journal of Medical Ethics* 1 (April 1975): 10-17.
- "U.S. Authorizes Research on Heroin as Painkiller." *Washington Post*, 9 December, 1978.
- Way, E. Long; Young, Joseph; and Kemp, John W. "Metabolism of Heroin and Its Pharmacological Implications." *Bulletin on Narcotics* 17 (January-March 1965): 25-33.
- Willette, Robert E. "Analgesic Agents." In *Textbook of Organic Medicinal and Pharmaceutical Chemistry* pp. 671-730. Edited by Charles O. Wilson, Ole Griswold and Robert F. Doerge. 7th ed. Philadelphia: J.P. Lippincott Co., 1977.

SOCIO-ECONOMIC ASPECTS OF HEROIN

- Abrams, Arnold *et al.* "Psychosocial Aspects of Addiction." *Journal of Public Health* 63 (1968): 2142.
- Bayer, Ronald. "Heroin Decriminalization and the Ideology of Tolerance: A Critical View." *Law and Society Rev.* 12 (Winter, 1978): 301-318.
- Bayer, Ronald. "Liberal Opinion and the Problem of Heroin Addiction." *Contemporary Drug Problems* 4 93 (1975): 93.
- Boyd v. United States*, 271 U.S. 104 (1925).
- "Cancer Experts Score AMA's Stand Against Heroin for the Dying." *Medical World News* (August 7, 1978): 41.
- "DEA Bans Production of Poppy as Codeine Source." *American Medical News* (June 13, 1977), pp. 1-9.
- Deininger, Mark A. "The Economics of Heroin: Key to Optimizing the Legal Response." *10 Ga. L. R.* 565 (1976).
- Dupont, Robert. "How Corrections Can Beat the High Cost of Heroin Addiction." *Federal Probation* (June, 1971): 43.
- "Government Plants Poppies." *Drugs and Drug Abuse Education Newspaper*, Nov. 1975, 4.
- Holden, Constance. "New Look at Heroin Could Spur Better Medical Use of Narcotics." *Science* 198 (November 25, 1977): 807-9.
- "Heroin Maintenance Becomes Debate Topic." *Christian Science Monitor*, 13 May 1977.
- Horton, Leilani. "Controversy Stirs on Domestic Poppies." *Drug Survival News* (March/April 1977).

- Koskoff, Yale David. "Nature of Pain and Suffering." *Trial* 13 (June 1977): 21-26.
- McCabe, O. Lee. "Heroin Maintenance: An Assessment of Its Potential Role in the Rehabilitation of Chronic Heroin Abusers." *Drug Forum* 4(2) (1975).
- Neal, Helen Keating. "Why Can't the Dying Have Heroin?" *New York*, 2 October, 1978.
- Pollen, William, M.D. "N.L.D.A.'s Role in the Supply of Schedule I Drugs for Therapeutic Studies," discussion at December 1978 PAIN AND DISCOMFORT MEETING, Washington, D.C.
- Preston, William. "How We Became Addicted to Drug Control." *The Civil Liberties Review* 4 (July-August 1977): 68-72.
- Smith, David and Gay, George. "Pharmacology of the Opiate Narcotics" in *It's So Good, Don't Even Try It Once—Heroin in Perspective*. Edited by George Gay and Leong Way. Englewood Cliffs, N.J.: Prentice Hall, 1972.
- Stone, Brenda. "After Years in the Closet Heroin Emerges for Scientific Scrutiny." *American Medical News* March 16, 1979: 17-19.
- Streit, Fred, Nicolich, Mark and Backenheimer, Michael. *Purchase Prediction of Schedule II Drugs Under the Controlled Substances Act of 1970: 1977-1981*. Office of the Division of National Institute of Drug Abuse: 1977.
- "U.S. Ready To Turn to Opium Cultivation." *American Medical News* May 26, 1975.
- United States v. Behrman*, 258 U.S. 280 (1922).
- United States v. Linder*, 268 U.S. 5, 45 (1925).

United States v. Moore, 423 U.S. 122 (1975).

Webb v. United States, 249 U.S. 95 (1918).

Zinberg, Norman, and Robertson, J.A. *Drugs and the Public* New York: Simon and Schuster, 1972.

COMPARATIVE LAW

Cabranes, J.A. "International Law and Control of the Drug Traffic." *The International Lawyer* 7 (Oct. 1973): 761-769.

Cohrren, J.J. and Hoover, L.H. "International Control of Dangerous Drugs." *Journal of International Law and Economics* 9 (April 1974): 81-112.

Dawkins, K.E. "Misuse of Drugs Act 1975." *New Zealand University L.R.* 7 (April 1977): 277-285.

Israel, Stuart M. and Magill, Kenneth M. "Decriminalizing Heroin." *54 Michigan St. Bar J.* (1975): 283.

Judson, Horace F. *Heroin Addiction in Britain. What Americans Can Learn from the English Experience.* Harcourt Brace Jovanovich: N.Y. 1973/74.

May, Edgar. "Narcotics Addiction and Drug Control in Great Britain," in *Dealing with Drug Abuse*, New York: Praeger, 1972.

The Medicines Act 1971, 41 Halsbury's *Laws of England*, c. 69 (1971).

Misuse of Drugs Act, 1971. 41 Halsbury's *Laws of England*, c. 38 (1971).

The Misuse of Drugs Regulations 1973, 13 Halsbury's *Statutory Instruments* no. 797 (1973).

The National Health Service Reorganization Act Regulations 1973, 43 Halsbury's *Statutory Instruments* No. 764 (1973).

Single Convention on Narcotic Drugs, entered into force in U.S.A. June 24, 1967, T.I.A.S. No. 6298, 18 U.S.T. 1408 (Amended 1972, entered into force in U.S.A. Aug. 8, 1975, T.I.A.S. No. 8118, 26 U.S.T. 1442).

Wasserman, U. "U.N. Convention on Drugs." *Journal of World Trade Law* 5 (Sept.-Oct. 1971): 573.

INTERVIEWS

Hogan, Harry. Educational and Public Welfare Division, Congressional Research, Library of Congress. Interview, 12 January, 1979.

Liebowitz, Richard. Drug Enforcement Agency, Department of Justice. Interview, January 1979.

Perry, Seymour. Chairman of Interagency Committee on New Therapies for Pain and Discomfort, Bethesda, Maryland. Interview, February 1979.

Quattlebaum, Judith. President, National Committee on the Treatment of Intractable Pain, 9300 River Road, Potomac, Maryland. Interview, 3 January 1979.

Sonnedecker, Glen. American Institute of History of Pharmacy, University of Wisconsin, Madison, Wisconsin. Interview, 26 January 1979.

Tocus, Ed, Ph.D. Food and Drug Administration, Washington, D.C. Interview, 7 March 1979.

CONFERENCE REPORTS

Black, Richard, M.D. "The Clinical Syndrome of Chronic Pain." Paper presented at Conference on Pain, Discomfort, and Humanitarian Care, National Institutes of Health, Bethesda, Maryland, 16 February 1979.

Fischer, Thomas, M.D. "Management of Pain in the Terminally Ill." Paper presented at Conference on Pain, Discomfort, and Humanitarian Care, National Institutes of Health, Bethesda, Maryland, 16 February 1979.

Houde, Raymond, M.D. "Clinical Pharmacology." Paper presented at Conference on Pain, Discomfort, and Humanitarian Care, National Institutes of Health, Bethesda, Maryland, 16 February 1979.

Krant, Melvin, M.D. "Death and Dying." Paper presented at Conference on Pain, Discomfort, and Humanitarian Care, National Institutes of Health, Bethesda, Maryland, 16 February 1979.

West, Thomas, M.D. "Management of Pain in the Terminally Ill." Paper presented at Conference on Pain, Discomfort, and Humanitarian Care, National Institute of Health, Bethesda, Maryland, 16 February 1979.

ENDORSEMENTS

We believe that the recommendation of the National Committee on the Treatment of Intractable Pain to authorize the medical prescription of heroin for terminal cancer patients under controlled circumstances is both responsible and provocative. The recommendation should serve as a work basis for consideration of appropriate reforms in our Federal drug laws.

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ADDITIONAL QUESTIONS BY SUBCOMMITTEE

- (1) What extent of cancer patients suffer from intractable pain and are not responsive to legal analgesics?

According to Dr. Robert Twycross of Oxford, who is experienced in the use of heroin, and free to choose it from among a broader array of drugs than that afforded American doctors, "about 10% of those suffering from painful terminal cancer...need injectable heroin to obtain pain relief." (JAMA-Medical News, Vol. 240, No. 15, 10/6/78, p. 1571) This 10% does not take into account the need for heroin in the last hours of life. Dr. Twycross, in his Oxford University dissertation, reports that "most patients receive parenteral diamorphine [heroin] during the last twelve to forty-eight hours of life...."

- (2) Why do you believe heroin provides analgesic qualities which make it superior to drugs such as morphine or dilaudid?

Because some doctors think so. In countries, such as Great Britain, and Belgium, where doctors are free to prescribe heroin, it is the drug of choice --by injection and by mouth--by some doctors. It was the drug of choice by some doctors in America before its import and manufacture were halted in 1926, and up to the 1950's in some medical centers in the U.S. until their supply ran out. Individual doctors and American medical societies say they want heroin available for cancer pain.

According to Dr. Twycross, when injections are required, heroin "is undoubtedly the best and safest of all the potent narcotic analgesics and is indispensable in the care of a proportion of patients with advanced cancer."

- (3) If heroin were to be approved for general therapeutic use, how should the drug be distributed.

In the same manner as other abused but valuable analgesics, such as methadone and morphine. A man from the Malinkrodt drug company told me heroin could be made easily from morphine. Or appropriate changes could be made in our laws so that heroin can be imported from the British manufacturer.

Additional Questions continued: 2.

- (4) If legal analgesics were available in more concentrated dosage forms, do you believe there would still be a therapeutic need for heroin?

Yes. Heroin is forbidden because it is addicting and because it is abused by criminals. Other drugs will fall into the same category as they become more potent and effective.

- (5) Do you have any suggestions as to how physicians and patients can become more knowledgeable about the treatment of pain? Can the Federal government be of greater assistance in this regard?

Attitudes must change before knowledge can effectively be disseminated. The medical need for narcotics must be given priority over the issue of criminal abuse, by the Federal government, and then by physicians and patients. Right now, patients in pain may be afraid to take a narcotic for pain, and physicians may be afraid to administer narcotics. Patients and addicts must no longer be thought of in the same category.

When drugs are more valued for their medical uses, and physicians have more flexibility in treating pain, a more positive, innovative and successful approach to the treatment of pain can evolve.

Attached is a booklet that responds more fully to the preceding five questions, entitled, "Authorizing the Medical Prescription of Heroin for Terminal Cancer Patients Under Controlled Circumstances."

Judith H. Quattlebaum
President and Executive Director
National Committee on the Treatment
of Intractable Pain
September 4, 1980

Mr. WAXMAN. Dr. Berger, did you want to add something?

STATEMENT OF HERBERT BERGER, M.D.

Dr. BERGER. Much of my thoughts on this subject have already been expressed, and certainly those of Mr. Dannemeyer are particularly cogent. It seems strange every addict can buy as much heroin as he needs on the streets of every city in the United States. It has often been said it is easier to buy heroin in New York on a Sunday than to get a drink.

Yet this material is denied to sick people who we physicians would love to treat. It seems strange to me that our country, which recognized only after 13 years that the prohibition amendment was a disaster should continue to prohibit the use of a medical drug for some 66 years.

I am one of the physicians who had the opportunity to use heroin in this regard, first in efforts abroad, and also because the original law did not prohibit the use of heroin; that is, the Harrison Act; it prohibited its importation and manufacture.

Since I am a physician for almost 50 years, many of my colleagues had hoarded heroin for this purpose, so they could use it for their terminally ill patients and also use it for obstetrical patients where it was extremely valuable to those women who became exhausted during the course of labor.

Heroin acting rapidly gave them some relief and being excreted rapidly did not narcotize the baby when labor recommenced. These physicians husbanded this material and used it until it was all exhausted.

Some question has been raised repeatedly as to whether these patients would become addicted to heroin. This is a matter of no moment. They are terminally ill patients, and should one be fortunate enough to recover, why, those individuals can be detoxified by methods that are well known.

I have under treatment at the present moment some 300 narcotics addicts. We are successful in detoxifying about 40 percent of these in the course of 3 or 4 months.

So that that really isn't the problem. We have interested throughout the world some 29 other parliaments which I have had the opportunity to address, in legalizing the use of heroin in the hands of physicians, and where this has occurred there is immediately a drop in the amount of crime committed in the name of heroin.

Our prohibition of this material has created an enormous black market where \$10 worth of heroin raised in Thailand or Syria is placed on the streets of our major cities for about \$10,000, all of this enormous profit being untaxed.

If we are to destroy this black market in heroin, we would have to do it by underselling it. We certainly can do that. That has been the case throughout the world.

Certainly in England, a country very much like our own, the black market in heroin has practically disappeared. Material can be obtained for medicinal purposes even for those addicts who cannot live without it for a moment from licit sources and doctors there—I am a consultant to them, so I am familiar with the situa-

tion there—are given the privilege of using this material even for addicted individuals until they can cure them.

Certainly the causes of death among our young addicts are largely overdoses because they know not what is in the capsule they buy.

We have confiscated material—and I argued with Mr. Anslinger about this frequently in the years gone by when he was Commissioner of Narcotics—we would confiscate material that had either no material in it or as high as 36 percent, the average being about 3 percent in this country.

The individuals who received the 36-percent concentration of heroin were as dead as if someone had shot them. The dilutants used in the improper use of these materials are extremely dangerous. Talcum powder, which is commonly used, deposits in the lung and produces permanent lung damage, which cannot be cured.

None of these are problems, however, in the case before us today. We are dealing now with hospitalized individuals under the care of physicians and nurses using drugs that are potent, more potent than those we have available now.

Certainly the morphine and demerol and other materials of this sort which physicians use regularly could be diverted to the streets, but they are not.

The street culture does not get their drugs from physicians. This is almost unheard of.

[Dr. Berger's prepared statement follows:]

HERBERT BERGER, M.D., F.A.C.P., F.C.C.P., P.C.

1400 JEROME ROAD
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Statement by Dr. Herbert Berger for hearing record of September 4, 1980:

It has always seemed strange that a government which took only 13 years to recognize the fallacies of the Prohibition of Alcohol continues to make the same mistake concerning heroin since 1914 (The Harrison Act) a period of 66 years.

We learned rapidly in 1933 that it is impossible to legislate the mores of our people; that, despite its bulk, we could not keep alcoholic beverages out of the country, and that we had spawned organized crime, an error from which we are still suffering.

Yet we persist in creating a black market in drugs which has been a windfall for criminals who make untaxed millions in illicit sales. Ten dollars worth of Syrian poppies after processing sells for more than \$10,000 in the streets of our cities. Worse yet we have created a huge group of drug using salesmen who do their best to induce ever more children into drug use so that the seller can thus support his own habit.

The National Committee on the Treatment of Intractable Pain and its indefatigable Chairlady Mrs. Quattlebaum has devoted much energy toward a step in the direction of legalizing a drug - heroin; not for general use but only to relieve the pain of terminally ill cancer patients. Heroin is derived from the poppy as is opium and the other narcotics. It possesses the characteristics of rapid onset and fairly rapid excretion.

Obstetricians have found it invaluable for the treatment of exhausted mothers who can, with heroin, obtain a few hours of rest without

narcotizing their babies. By the time labor starts again the narcotic is excreted and the baby is born wide awake and un-addicted.

In 1904 when the importation and manufacture of this drug was discontinued by the Congress, obstetricians hoarded their meager supplies for this purpose.

Those in the care of terminal cancer likewise hoarded what they could for the immediate relief of their patient's pain.

It is important to understand how the drug came to be banned in the first place. The Harrison Act was passed in 1914 to control the activities of Chinese secret societies which waged war against each other to control the sale of smoking opium to their countrymen who had been imported into their country during the construction of the trans continental railroads.

Likewise opium products were used in many nostrums and patent medicines.

The Congress decided to use its taxing powers to control this situation and I.R.S. stamps had to be placed on all imported narcotics (like those on cigarettes). It specifically stated that "nothing was to interfere with a doctor and his patient - in the practice of medicine".

The law caused no problems until we passed the Prohibition Amendment and the same Commissioner who tried to keep alcohol out of the country was given the drug problem to handle as well. He concluded that the medical profession's right to use these drugs must be abrogated.

A Dr. Behrman of Hoboken, New Jersey was found who was selling narcotic prescriptions - one for 4,000 1/4 grain tablets. He was brought by the Federal Bureau before the Supreme Court without going through the lower courts. The court ruled 5-4 that it was not the practice of medicine to prescribe such enormous numbers of pills.

-3-

Obviously this didn't belong in any court. The State of New Jersey would certainly have revoked Dr. Behrman's license and the problem would have ended there. It is interesting to note that some very distinguished justices saw the fallacy of this decision. They were Justices Oliver Wendell Holmes, Frankfurter, Cardozo and Van Deventer.

The Federal Bureau now reasoned that if prescribing 4,000 tablets is "not the practice of medicine" what about a much lesser amount - especially if prescribed - to relieve the suffering of an addict.

An addicted stool pigeon was introduced as a patient in the office of Dr. Lindner of Portland, Oregon on a Saturday afternoon complaining of kidney stones. She stated her own doctor was not available over the week-end and that he had x-rays, etc. that proved that diagnosis. He gave her a prescription for 4 tablets of morphine and as she left his office she signalled her colleagues who immediately arrested the physician. His case, too, eventually reached the Supreme Court, who recognizing their prior error, reversed the Behrman decision.

To this day the Federal Bureau cites the Behrman decision and ignores the Lindner case which states explicitly that to treat the pangs of withdrawal is in the province of the medical profession.

But the damage had been done and the Bureau asked for and received the 1924 legislation banning the importation and manufacture of heroin. This is as specious a bit of reasoning as to pass a law against digitalis so as to rid our country of heart disease. The 1924 law cured not one addict.

This law has given us the worst narcotic problem in the world. The black market has moved in with proselytizers and pushers so as to control an enormously profitable untaxed business.

Should the Bureau seize some narcotics (on rare occasions) the result is an increase in the price of narcotics and an increase in crime as the addict seeks to supply his needs. This relatively inexpensive material now sells for from \$60 to \$100 a day in our large cities. In fact, proselytizing among young children actually increases with each "successful" police effort.

Is there a danger of the cancer patient becoming addicted to heroin? Some may - about 1/6 of them - but this is of no moment to a person who is going to leave this world shortly.

What if they recover from cancer with an addiction to heroin? Then the 16% who become addicted can be detoxified as are other addicts today.

Will this cause heroin to reach the streets? Not at all. The material will be used by physicians and nurses for patients. Demerol and morphine are used legally in this fashion today. There are no reports of its misuse.

Reference has been made to the 16% of patients who may become addicted - only that small number of individuals have addictive personalities. The rest cannot be addicted. During my years in active combat in the Navy during World War II we treated many soldiers with daily doses of morphine who were badly burned by flame throwers. When they were healed the morphine was stopped and they did not become addicts.

What advantages does heroin have over other narcotics? Primarily its rapidity of action. When one is in pain every second seems an interminable period of agony. Dose for dose it is three times as effective as morphine.

The Blood Brain Barrier vs morphine is considerably higher than it is to heroin. Therefore heroin gets in the brain faster. By way of explanation, there exists in the human body a series of membranes which keep some of the body's chemicals in the brain in amounts different from that in the blood. Some chemicals traverse this blood brain barrier more easily than others. Heroin is such a drug - therefore it brings relief from pain more rapidly than morphine or demerol.

The medicinal use of heroin under professional care carries no risk of diversion to the streets. The dose is accurately dispensed. It is not used in combination with other similar drugs whose effects may be addictive. The material is pure and clean and no diluents are used. All injections used by medical personnel are sterile. Overdoses therefore are non-existent. Infections do not occur.

Therefore there are many reasons for making heroin available for medical care and literally no reason to keep it from the most piteous patients we treat - those suffering the agonies of cancer pain in the last days of their lives. No patient should ever wish for death so as to bring an end to pain. We should be permitted to use the weapons to abolish it.

Herbert Berger, M.D.

Mr. WAXMAN. Dr. Berger, providing effective pain relief to the victims of terminal cancer, what do you see as the most critical deficiency? Is it the improper use of existing analgesics by health professionals, or the statutory restrictions on the therapeutic use of heroin?

Dr. BERGER. It is the statutory restrictions.

Physicians know how to use these materials. If they become available, they can be taught to use them as they are taught to use all drugs.

Mr. WAXMAN. Mrs. Quattlebaum, you refer to Dr. Twycross of Great Britain. In a widely publicized move, he discontinued the oral use of heroin in his hospice practice. Dr. Twycross' clinical findings demonstrated to his apparent satisfaction that morphine, when administered in equal analgesic dosages produced relief equivalent to heroin. Is this also your understanding and do you still endorse the use of heroin when oral administration is indicated?

Mrs. QUATTLEBAUM. He found in his study, he mentioned "substituting" morphine for heroin. That is fine if it works as well.

I think the reason he did the study at St. Christopher's was to get around using heroin, which is a rather negative approach, and I was told by Dr. West from St. Christopher's back in 1977 they would stop using the oral heroin because they wanted to be a model for the hospice movement in this country where heroin was prohibited.

So it was a political reason for discontinuing the oral use. It was not a medical reason.

Mr. WAXMAN. Could you or one of the other gentlemen with you answer whether—inasmuch as there are a number of other powerful analgesics currently on the market which are significantly more soluble in water than morphine and several times more potent than heroin—more appropriate use of drugs such as methadone or hydramorphine could provide the relief required by the individuals requiring a highly soluble injectable analgesic?

If not, why not?

Dr. STERNLIEB. Thank you for the opportunity to comment. I would like to answer your question directly, if I may.

I would like to make a couple of extra comments about the subject in general.

The limitation of the concentration of the pain medication in solution is such we have to give a large volume, as was mentioned by Representative Madigan about the use of morphine.

It is my understanding that the most potent agent we can give is dilaudid which is hydramorphine. That is available in a 4 milligram/cc dosage; it comes in 1 milligram, 2 milligram, and 4 milligram dosage.

In my experience treating patients at the bedside, I must give often two ccs of this drug every 3 hours to get relief of pain. That is in the beginning. When the patient becomes more used to the drug, in the last few days of life, often 3 or 4 ccs are necessary. That is a large injection.

Furthermore, morphine and dialudid and demerol all have much more nauseating properties, much more obtunding properties than do heroin.

Therefore, my patients are gorked out, as we use in the vernacular, and as Dr. Carter said that should not be a consideration of a patient just lying in a coma or almost being killed by the physician.

So we have a double reason why we prefer heroin.

The first is, its greater solubility. We can give a much greater injection. I would have to give a patient perhaps 16 or 18 or 20 ccs of injection which is very painful over a period of 24 hours with the other drug, whereas I can use perhaps a total of 1 cc in 24 hours of heroin. That is the main reason it is important.

Mr. WAXMAN. Can dilaudid or morphine be reformulated into more concentrated dosages?

Dr. STERNLIEB. It is my understanding it cannot be made more concentrated unless it is made more vulnerable to breaking down and precipitating in storage.

Mr. WAXMAN. How about dilaudid?

Dr. STERNLIEB. I think they would go higher if they could. I think 4 milligrams cc is as strong as they can make it without having it become unstable.

It is not quite as effective as is heroin.

Let me, if I may, comment a little further. I want to emphasize two major factors. You can mention many advantages of heroin. In my dealing with patients, certainly at the bedside level, I am fighting their terrible pain plus their anxiety and depression and fear and hatred and frustration, "why is this happening to me?"

I can't control them with narcotics alone. I can't. I am giving them at the same time an antidepressant, either orally or by injection, antinausea medication, and I am giving three or four medications which can all be replaced, we believe, by one simple small injection of heroin.

I think this is the appropriate time to mention a comment of Dr. Carter's. He did say that heroin is said to be very addictive. With due respect, Dr. Carter, I might point out that we are dealing with two separate items.

We are dealing with apples and oranges. The drug abuser is not the same person we are talking about as the person who is dying of cancer.

Mr. CARTER. No, sir, I know. Dr. Berger spoke of using it in obstetrics. It is stated by many physicians that even one dose may be addictive. If we spread the use other than for patients dying of cancer, we might also increase the use of heroin among our patients around the country.

I would ask you in turn a question: In speaking to a heroin addict, if you tell him "You are on an island; you have all the heroin you want, will ever need. You have all the heroin you will ever need," will he ever quit? What is the answer?

Dr. STERNLIEB. I think the addict, I believe, will say he wants it. He wants the euphoria.

Mr. CARTER. The universal answer is that he would never quit if he had all that he could use.

I don't want to deny the use where it is needed. If we start using it in obstetrics and things of that nature when really childbirth in as many cases as possible should be normal and natural, we are getting into—we are going to get into great difficulty.

We are talking about the use of this in terminal cancer.

Dr. STERNLIEB. The bill represents only using it in terminally ill cancer patients.

Mr. CARTER. Obstetrics was mentioned though.

Dr. STERNLIEB. I think Dr. Berger's point was that the heroin is rapidly excreted. If a patient is going to be having meaningful time with his parents, family, or friends before he dies, we don't want him to be narcotized to the point of being totally comatose.

It would be nice to have him alert enough to speak to his wife or her husband or so forth. That is why, among other reasons, we prefer heroin. It doesn't make you quite as doozy and groggy as do demerol, morphine, dilaudid and so forth.

If I may, with your permission, Mr. Waxman, I have one quick comment to make. It is very difficult for us to deal with possible arguments about this matter without hearing them first.

I am going to try to anticipate what might be said after we speak about this matter, and I beg your indulgence. I want to just mention a few obvious things.

There are three kinds of scientific medical evidences that we all employ: The statistical evidence is the most reliable in the sense of being correct as far as large studies are concerned. You all know the adage about lies, damned lies, and statistics. The second form of evidence is anecdotal evidence or testimonial evidence. The third form of evidence is what you hear from someone who has had experience in a certain matter.

I caution you in your deliberations not to be befuddled by the statistics you might hear because what happens with a thousand patients doesn't help me with my single patient at the bedside when he is suffering or in agony.

I want to point out we should not try to reinvent the wheel. We are not looking for more research in heroin. It has been done over and over again. It has been shown to be effective in almost a century of use.

I plead that we don't be misled by those who might consider research as being the end in itself. We need help for our patients who are dying and suffering, and we ask the Congress to make available to us for use in hospitals and hospices only heroin.

Thank you.

Mr. WAXMAN. Let me ask a very practical question of whichever of you has an answer.

Do you know of any pharmaceutical company which has indicated an interest in manufacturing or distributing heroin for this purpose, and, if not, how do you suggest heroin be made available for physicians' use?

Mrs. QUATTLEBAUM. I spoke to a doctor who works at a hospice and with drug companies. He said that he thought that was putting the cart before the horse.

Once the Congress makes it easier to manufacture it, then you might find the drug companies coming forth. But their real objection is that the Government is nasty to them, on their back every 5 minutes, and, as far as working with narcotic drugs, the redtape involved, and the tremendous expense and research and re-proving it—I think maybe if we have the law, we might find the company.

Mr. WAXMAN. I assume heroin is not patentable?

Mrs. QUATTLEBAUM. I don't think it is. It is so simple to make, but you know, maybe as a public service they would make it.

Mr. WAXMAN. Dr. Carter?

Mrs. QUATTLEBAUM. Maybe Dr. Berger has a comment?

Dr. BERGER. Those companies that now prepare morphine really can make heroin by a single step. Most of the heroin that we see purchased on the streets of our cities is made in kitchens and in sort of an absurd little laboratory acetylating morphine into heroin.

Dr. Carter raised a question a moment ago about the—perhaps you did, Chairman Waxman—about the rapid onset of the use of heroin over morphine. Naturally, to a person in pain, every second is interminable to them.

We have to go to a little physiology for a moment. We have a blood/brain barrier, a membrane that separates the brain's fluids from the blood. Different materials exist in different quantities on either side of this membrane, and a substance, in order to function in the brain, has to cross this barrier.

Heroin does this much more rapidly than does morphine. This is the reason for its advantage in rapidly getting relief for a patient in pain.

Mr. CARTER. Mr. Chairman, again I certainly want to state that I support relief of pain in terminally ill patients by whatever substance is necessary.

If heroin is necessary, I certainly want to see it used. Legislation should be passed or other arrangements should be taken that are necessary so we can relieve intractable pain in those who are dying.

I would like for one of you to identify drug manufacturers who are willing to undertake the expense of obtaining approval by the FDA of a new drug application for heroin.

Do you know a manufacturer who would like to do that?

Dr. BERGER. Well, there are two companies that are foremost in manufacturing narcotics in the country. One is Mallinckrodt in St. Louis, and Eli Lilly in Indianapolis.

Were there permission for these materials to be made, I am sure they would be more than happy to begin to manufacture this material. If necessary, I will get for the committee proof of that statement.

Mr. CARTER. I would hope that would be possible. Because of all the regulations attendant to this, and the transfer from schedule I to schedule II, I am not so sure that they would be so willing to manufacture this.

Have you had any experience with zomepirac?

Dr. BERGER. No; I have had none.

Mr. CARTER. Have you heard of it?

Dr. BERGER. Yes. Those who introduced it are not speaking in terms by which it can be compared to heroin. They admit immediately it is not as good.

Mr. CARTER. They admit what?

Dr. BERGER. Those who have introduced the material admit it is not as quickly acting or efficacious as heroin.

Mr. CARTER. I don't believe I have seen a comparison with heroin.

Mrs. Judith Quattlebaum. In Medical World News, they had an oncologist, Francisco Tejada, compare it double blind with percodan. He says:

But zomepirac does not substitute for opiates, and patients already accustomed to regular doses of narcotics do not generally report satisfactory response when switched to a nonnarcotic agent such as zomepirac.

Its greatest potential usefulness among cancer patients depends on management of the pain of malignancy without the use of narcotics. But narcotic medication, because of its central effects, may be more effective for terminal cancer patients.

Mr. CARTER. That is Medical World News. Is it as effective, more effective, as morphine? It is not as nauseating, not as addictive. I think certainly it should be tried.

If we use a drug like that which is nonaddictive and will have the desired effect, we would relieve ourselves of a great deal of difficulty and danger if some of us mean to use it in obstetrics as well as terminally ill patients.

Certainly we need to use whatever is necessary to relieve a terminally ill patient. I support that.

Yes, sir?

Dr. STERNLIEB. Mr. Chairman, Dr. Carter, I would like to point out to you something that happened about 30, 40 years ago when Winthrop Laboratories introduced demerol as the answer to a maiden's prayer.

It was thought to be better than morphine, not addicting.

Mr. CARTER. We know it is not. We know it is nauseating in many cases.

Dr. STERNLIEB. Precisely. The same thing applies—

Mr. CARTER. I certainly don't think it is too great.

Dr. STERNLIEB. The same thing applies to the drug talwin.

Mr. CARTER. Some people believe dilauidid is more effective than morphine.

Dr. STERNLIEB. Let's not be seduced by the advertisements of the drug companies that they have a less addicting agent, even zomepirac.

Mr. CARTER. The drug companies are not promoting that. As far as I know, it has not been approved by the FDA. It is experimental at the present time, but we must go on and try to plan something—if this has a possibility of relieving pain and not being addictive, of course, we must pursue it because it would be—if it relieves the pain and is not addictive, it is a consummation about what we should wish. It is something we want to get.

We know heroin is extremely addictive.

Yes, sir?

Dr. STERNLIEB. I apologize for being argumentative.

Dr. Carter, any drug that gives you a desired effect, no matter how mild it may be in the abuse potential patient will be addictive.

Second, please, sir, we don't care about addiction in the person who is dying within a matter of days or weeks. We only care about making him live a more peaceful existence in those last few weeks.

So I agree with you we don't want addiction to be a problem, but it does not apply to the patients we are talking about in this bill.

Mr. CARTER. It does not, but the problem is that it might be diverted from its regular use. That is what we want to avoid. That is why we should have something that if it is possible is not addictive.

As I said—yes, sir.

Dr. MONDZAC. Mr. Chairman, Dr. Carter, I just wanted to make a few comments on heroin in general and answer some of the questions that have been raised earlier.

I think that Mr. Waxman asked about better use of known narcotics and what effect that would have on heroin adaptation or heroin use.

I think it probably would have an effect on how all narcotics are used, including heroin.

I think, in fact, one of the reasons for the movement to introduce heroin is because physicians are being made more aware that narcotics can be used with more flexibility than they have been in the past; that they have not always been used to the maximum. Sometimes even known drugs, when used maximally, are not effective.

Just as a comment, the American Society of Clinical Oncology, which represents about 2,000 oncologists, had 6,000 members at their meeting in San Diego in May. They had a whole morning panel on management of pain in terminal cancer patients.

I think this is a sign of the times. I think the introduction of the legislation by Mr. Madigan, as far as heroin, is part of the same kind of impetus that is arising.

Dr. Twycross, who I have had the opportunity to talk to on two different occasions, I think probably has published more on heroin, at least in the recent literature, than anyone I am aware of.

He makes extremely important points that have been made before that I think are worth remarking.

First, he has demonstrated that it is less nauseating than other narcotics, specifically morphine. He has demonstrated, as have others, that it acts more rapidly. He also has stated that as far as parenteral or intravenous use of narcotics, heroin is the drug of choice. He feels in his patient population which compares experience at two hospices and review of numerous patients in the literature, that at least 10 percent of patients do not find adequate pain relief with existing narcotics and would need heroin.

The things about solubility, I think, are extremely important; the aspect of the solubility of heroin, I think that point has been well made this morning.

As far as control of heroin and the leakage of heroin into the street, the fact the legislation confines it to hospital and hospice use only means it would be more limited in use than any other schedule II narcotics which can be filled at a drug store, morphine, dilaudid, methadone, you name it. I think control would even be greater.

The addiction potential I think is something that we don't fully understand. Dr. Twycross makes the statement in at least two published papers that he has seen patients who have had heroin for use in severe pain who have not had to increase their doses, which is commonly part of the World Health Organization definition of addiction and who also have been able to decrease dosages when miraculously, or due to medical science, their pain has decreased.

I think although we are not concerned with addiction, I think the little bit of data that we have does indicate that it may not be quite as terrible as it has seemed to be in the past.

I am personally hopeful as a physician, as somebody who likes to consider himself aware of what is going on in medicine—I feel I owe this to my patients and my colleagues—that as heroin is made available through Mr. Madigan's legislation, that we will learn more about this drug, learn more about its good points and bad points, and be able to use it more intelligently.

Hopefully some of this—hopefully we know some of this, but I think this would be—this information would be made available when the drug was made available, and I think we would all learn a lot from it.

Mr. WAXMAN. Excuse me, Doctor. We have a time limit for each member to ask some questions. I want Dr. Carter to be able to complete his questions.

If you or any of the others have additional comments you want to make, after you are finished or even after we hear from the other witnesses, we would be pleased to receive them for the record.

Mr. CARTER. I would like to hold this up. It is an article about heroin out of the Washington Post, "Heroin Use Up, Overdose Deaths in District Double as Quantity and Quality Increase."

Of course, that might be relieved if we had the method of the British where they can go and get an injection of heroin if they want to.

Don't get me wrong. I support the use of it in terminal stages of cancer to relieve pain, but I do not want to see diversion, and if we use it in obstetrics as has been suggested, or in other cases, we certainly would get in trouble.

Thank you, Mr. Chairman.

Dr. BERGER. Mr. Chairman.

Mr. WAXMAN. Mr. Madigan, do you have some questions?

Mr. MADIGAN. No; not of these witnesses.

Mr. WAXMAN. Dr. Berger? Do you have one last point?

Dr. BERGER. One last thing.

The question of addiction has come up repeatedly. It really plays no part in this. It has been mentioned by several. I think it is important to keep in mind there exists among us people with an addictive personality. Those individuals can become addicted to drugs, alcohol, or anything else. They amount to about 16 percent of the population as far as those of us who have studied this can figure out.

The reasons for this are perfectly obvious when you realize that some 70 million Americans drink some alcohol every day. It certainly isn't the drug that makes an alcoholic out of them; it is the personality that makes them an alcoholic.

Sixteen percent of those who drink every day will become alcoholics. The same is true of heroin addiction. We have done a study of this sort in New York in which we actually studied individuals who had taken and tried heroin, and of those who tried it, only 16 percent of them became addicted to it.

Mr. CARTER. Mr. Chairman, on this I have to respond to that. We have treated cases of addiction in this country, and I believe the

relapse rate of those who are addicted to heroin was 90 percent. That was at the Narcotics Hospital in Lexington, Ky.

Dr. BERGER. It is probably more than that.

Mr. CARTER. You know, we need not kid ourselves. We know this is highly addictive. We are going to use it for a special purpose, as I see it. I am all for it. Thank you, Mr. Chairman.

Mr. WAXMAN. Thank you.

Let me thank each of you for your participation here this morning. We will look forward to receiving any additional materials or comments you may wish to submit.

[The following statements and letter were subsequently received for the record:]

STATEMENT OF REV. JOHN F. X. SHEEHAN, S.J.

Distinguished Members of the Committee:

First, let me express my deep gratitude at being allowed to participate in a small way in the judgment being made before Congress on the legalization of heroin for use among the terminally ill. It certainly has been some time since I have felt so "proud to be an American" as the beloved cliché has it.

In the Gospel of St. Matthew, Chapter 25, there is an arresting picture of the view which an early Christian community had of the end of days. The just, standing before the Lord, are pleased, but puzzled. He is telling them that they are worthy to enter the kingdom because they had found him sick and naked and hungry and in prison, and they ministered to him. But the just protest that never had they found him sick or naked or hungry or in prison and how could this be? And the Lord tells them, "So did you find my 'least brethren' and in ministering to them, you have ministered to me."

Careful study of these passages makes it clear that an accurate rendition could be "you found me in pain and you ministered to me."

The expression "least brethren" hoi adelphoi elachistoi is an attempt by the New Testament to translate the expression anawim of the Hebrew scriptures. This phrase refers to the "little people" of society: the weak, the sick, the powerless, the abandoned. The school of St. Matthew insists as do the

Hebrew scriptures that it is in ministering to them, first of all, that we are in a position to minister to God.

It is my deep conviction that the terminally ill are among the ~~anavim~~ of modern American society, and I am urging that society which sees itself in the Judeo-Christian tradition so to minister to the Lord.

If there is such a close relationship between ministering to the Lord and legalizing heroin for the terminally ill, why has the legislation not been enacted long since? This is a fair question. In my judgment as an American citizen, I think that the reasons are to be found in the following areas. (1) It has always been treated as a medical question although, it is a social question. (2) The political problems attendant on the legalization of heroin have been extremely difficult.

Let me discuss the matter of the medical objectors first. It is, as I have said, not a medical question. Whether or not heroin should be administered to this or that individual patient (in the presumption of legalization) is a medical question. But whether or not medical heroin should be available to a society is a social question, to be decided by all of its citizens.

Why have some doctors opposed the legalization of heroin? In the judgment of a layman in medical matters--which I am--the hidden agenda of the medical objectors seem to be these. There is no physician in the United States with a practice of any duration who has not presided at the deathbed of patients who died in extreme pain because of the unavailability of heroin. Most of us have to live with certain areas of "denial" in our lives in order to get our necessary jobs done. With deep affection

and sympathy I am suggesting that physicians with such memories simply cannot tolerate them, and so have succeeded in persuading themselves that their patients did not die in agony. But they did. While we can be, and indeed ought to be, deeply sympathetic with this understandable human reaction of some doctors we cannot allow it to interfere with our making the proper legislative decision.

Doctors speak very feelingly of the problems of addiction. Statistics are hard to come by, but physicians would seem to have more than their share of difficulties with drug abuse. The fact of the matter is, however, that "recreative chemicals" are widely available in our society, and the availability of heroin under closely monitored circumstances in hospitals that deal with the terminally ill would make an insignificant addition to heroin available in the streets. It is conceivably true that the presence of heroin in a hospital adds another burden to medical personnel, who, at least on the unconscious level, have fears of drug addiction.

But I assert our main thesis: the primacy of rights in this matter decrees that foremost to be considered are the rights of the terminally ill. We can be sympathetic with the fears of medical personnel, but we cannot allow those fears to influence our decision.

With regard to the political objections: I am extremely sympathetic with the reluctance of legislators over the years to favor this issue. In order to be able to serve fruitfully in Congress, one must be elected and reelected. In order to be re-elected, one must not only be a prudent legislator, but one must

be so perceived. The dangers of a demagogic opponent's lighting on a vote in favor of the legalization of heroin is very real. It is because of my concern with this difficulty of legislators that I have been willing to lend my name and my titles to the cause of legalization. I am a Roman Catholic priest; I am a Jesuit; I am a professional theologian; I have served for six years as chairman of the oldest Ph.D. program in academic theology under Roman Catholic auspices in the United States; I have become a full professor in that department. Under all these rubrics I speak firmly in favor of the legalization of heroin as a socially just and proper decision on behalf of a large and deprived element in our society.

Why am I as a priest and a theologian concerned with the availability of heroin to the terminally ill? In my own personal life--as a matter of public choice--my primary values are those of the spiritual and the supernatural. Further, as a trained philosopher, I believe Man to be a reasoning animal. I much esteem his reasoning capacities and see them to be among the greatest of all human goods. Nonetheless, if man is a reasoning animal, he is still an animal. This animal cannot concentrate on any higher good when suffering from excruciating pain until the pain somehow or another is brought under control.

I see the availability of heroin as a means that would make it possible for human beings in the last days of their lives to be freed from pain, so that occasionally during those days, they would have moments to reflect on the great spiritual and human values. I honestly see heroin as a gift of God which his children--the anawim--have been deprived of too long. As a theologian

I see another reason to favor the legalization of heroin. Among all levels in our society, there is a perceptible increase in the acceptability of euthanasia. I see euthanasia generally as an evil. In making judgments on the subjective guilt of an individual person who has chosen suicide rather than face intractable pain, I hold a benevolent view. I do not see the divinity as imposing a burden on anyone that is beyond his/her strength to bear.

Still, every act of suicide, whether performed by the individual without any help at all, or assisted by others, in some mode of voluntary euthanasia, is a serious blow against the life oriented values that lie at the very heart of our Judaeo-Christian society.

I believe that the legalization of heroin would obviate the only strong argument that exists for voluntary euthanasia among the terminally ill. I began this statement with a quotation from the Gospel of St. Matthew. And I summed it up in this fashion--"as you have ministered to the pain of the anawim, you have ministered to me." There is a humanistic passage outside the Judaeo-Christian tradition which points up the sympathy that stirs all human hearts at seeing persons in pain that is presently without ministry.

The Latin poet Virgil has a mythic passage in which his hero sees some souls of the dead caught at a halfway point between this life and the next and living in a kind of exile, and he says of them:

Tendebantque manus ripae ulterioris amore

Aeneid Book VI, l. 314

"Filled with longing for the distant shore
they stretch out their hands in yearning.

This image of the departed halfway between one world and another has haunted men's memories for nearly two thousand years. I see the terminally ill, the anawim of our society, standing between one world and the next, reaching their arms out to us with a plea that we may lead them to an intermediary stage, an isle of freedom from pain, where they may in a gracious, and human, and dignified way, await their ultimate transitus to that most distant shore.

Respectfully,

JFX Sheehan, S.J.

Rev. John F. X. Sheehan, S.J.
Professor of Theology
Marquette University

Statement of Dr. James T. Quattlebaum, board-certified psychiatrist and a Director of the National Committee on the Treatment of Intractable Pain, for hearing of September 4, 1980.

Chairman Waxman, Congressman Walgren, Members of the Subcommittee on Health and the Environment, thank you for allowing me to add my brief remarks for the record to the testimony presented by our Committee.

The continuous negative position of our federal bureaucracy toward the use of heroin to alleviate terminal cancer pain reflects such a restricted viewpoint as to require comment in two areas. The position that the federal bureaucracy has taken is: (1) that research is already adequate; and (2) that research is needed.

Our government has steadfastly claimed no unique advantage for heroin, currently based on an assumption that two incomplete and only partly relevant American research projects are definitive, while 80 years of British experiences count not at all. This is not only the ultimate in empty chauvinism, but is a mockery of scientific objectivity.

Simultaneously, monotonous and repetitive pleas for more research have been used as excuses for inaction (and as justification for funds) not just at present, but from time immemorial. "Need for research" opposition to heroin is currently at least three years old, and the chances of really adequate (American) studies of heroin in our lifetime are nil. A "New Drug Application" is as inappropriate for heroin as for aspirin.

Bureaucratic obstruction is an intolerable obstacle to the adequate prevention of pain. Legislative relief, embodied in Congressman Madigan's proposal, is necessary and urgent.

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21 October 1980

Hon. Henry A. Waxman
Chairman, Subcommittee on
Health and the Environment
of the Committee on Inter-
State and Foreign Commerce
Room 2415
Rayburn House Office Building
Washington, D. C. 20515

Dear Congressman Waxman:

Upon the suggestion of Acting-Chairman Doug Walgren, who requested that we submit some of our additional comments in writing, because of the lateness of the hour, I should appreciate your consideration of the following thoughts, which, although possibly mentioned in previous testimony, deserve emphasis:

- I. Although studies of the efficacy of heroin and morphine given orally showed no appreciable advantage of the former over the latter, it is a well-known fact that injected heroin is more rapidly-effective and more powerful in relieving pain than are other injected opiates. This is one of our salient points!
- II. One of the major advantages of Representative Madigan's bill is that it is aimed exclusively at a target population of terminally-ill cancer patients with intractable pain in a hospital or hospice setting. It is precisely this feature that makes the question of addiction to heroin completely irrelevant. One is not concerned about possible addiction to an analgesic agent in a terminally-ill patient.
- III. It is indeed recognized that ignorance of proper prescribing habits and of optimal use of currently-available pain treatment modalities is a major factor in the needless suffering of many patients. We wholeheartedly agree with this hypothesis. We welcome the admirable endeavors of the National Cancer Institute to educate American physicians in this matter. We submit, Mr. Chairman, that it will take our medical establishment (medical schools, post-graduate training programs, etc.) at least a decade of intensive effort to re-educate health professionals to disregard old

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nostrums and prejudices before any significant revision in pain treatment is accomplished. It is not inconceivable that even an entirely new generation of physicians would be the first ones to understand, de novo, the optimal use of analgesics in the treatment of severe, intractable pain.

We borrow a phrase from our legal confreres: "Time is of the essence." Do our Congressmen wish it on their collective conscience that their failure to move ahead now with the legalization of heroin, as proposed by Representative Madigan, is likely to cause thousands of unfortunate American cancer victims to suffer untold agonies while the wheels of progress of medical re-education grind ever so slowly ahead? Let us not forget our humanitarianism!

- IV. We wonder, if currently-available injectable analgesics could be manufactured in more soluble and/or in more concentrated form to provide more drug per unit volume, why has no pharmaceutical company done so? It is obvious that physical and chemical constraints preclude such production.
- V. One need not look far to find an answer to the oft-posed query, "Why is heroin the drug of choice by addicts?". It is primarily because heroin does indeed produce a euphoria, an elevation of the mood and a "high" that is preferred by addicts. This unique property is critically important in our management of patients with the intractable pain of cancer. They are depressed, angry, frustrated, frightened. I and my colleagues have been unable to alleviate their pain with the currently-available analgesics, because these drugs do not combat the psychic component of pain. Heroin is unique in that it accomplishes these objectives better than any known single agent. It would allow us to avoid "poly-pharmacy" with its attendant costs, inconvenience and discomfort, as well as the relatively high incidence of undesirable side effects.
- VI. Presently we are forced to give a cancer victim a number of drugs merely to permit him to spend his few remaining days or weeks in relative comfort, yet each drug we give is apt to produce some negative effects. A typical example of such a situation in the following scenario:

The patient is in constant, severe pain. He is

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nauseated, and he often vomits. He is anxious and depressed. He sleeps fitfully during the day, when he is narcotized by analgesics. The family sits at the bedside, eager to comfort the victim. He is unable to appreciate their attentiveness and empathy, because he is groggy and "dopey". Time spent in meaningful colloquy with loved ones is denied both victim and family. At night, alone with his morbid fears, he resists the effects of sedatives and analgesics and suffers even more acutely.

What "magic" do we physicians offer these poor souls in their last days?

We give large volume injections of morphine or Demerol or Dilaudid.

(side effects: more depression of mood; more somnolence; painful injection sites; more nausea and vomiting; etc.)

We give large volume injections of antiemetics (Compazine, Thorazine, Tigan, etc.)

(side effects: very painful injection sites; drowsiness; extra-pyramidal syndrome, which causes painful muscle spasms and symptoms similar to those of Parkinsonism; occasional liver toxicity; occasional allergic drug reactions)

We give mood elevators or antidepressants (e.g.: Elavil, Triavil, Sinequan, etc.)

(side effects: Often cause opposite reaction with severe lethargy and serious psychiatric disturbances; occasional allergic drug reactions)

We give "pep" agents (e.g.: Dexedrine, Ritalin, etc.)

(side effects: hyperactivity; tremor; insomnia; suppression of already-impaired appetite)

Let me assure you again that we fervently believe that such a situation, which is the rule, rather than the exception, could be remedied by our having available, in carefully-selected cases, a drug such as heroin.

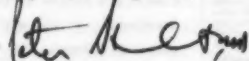
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- VII. For those cynics, who are concerned about possible diversion of heroin to illicit channels, we hasten to point out to the Subcommittee that cocaine is certainly as popular, if not even more popular than heroin, among today's drug abusers; nevertheless, we are unaware of any illicit use of cocaine that is currently stored in hospital and public pharmacies and even in the private offices of certain physicians, notably otolaryngologists.
- VIII. There are no adequate reasons to heed the advice of the "arm-chair" physicians and bureaucrats that additional clinical studies comparing heroin with other analgesics are needed. Scientific studies are certainly necessary and desirable before the public is subjected to a new drug (e.g. Thalidomide); however, heroin is certainly not new or untried. Its side-effects are as predictable as any of the opiates that have been in use in this country for many years. We need not, Mr. Chairman, re-invent the wheel!

We wish again to thank you and your Subcommittee for giving us the opportunity to share our views with you. We stand ready to respond at any time to any further questions that you might wish to address to us.

Respectfully yours,



Peter Sternlieb, M. D., F.A.C.P.

Mr. WAXMAN. Without objection, I would ask that the written statement of Ms. A.-T. Levinson, executive director of the organization Concern for Dying, be printed in the record at this point. [The statement referred to follows:]

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CONCERN FOR DYING

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TO: House of Representatives
Subcommittee on Health and the Environment

FROM: A-J Levinson, Executive Director, Concern for Dying

RE: H.R. 7334 - To amend the Controlled Substances Act to authorize the use of heroin for terminally ill cancer patients.

I represent Concern for Dying, the largest organization in the world concerned with the problems faced by dying people and their families. Concern's mailing list has close to 250,000 names of individuals representing all major religions, professions and occupations, all seeking a voice in decisions made concerning treatment during terminal illness. In addition to those who elect to receive Concern's newsletter, there are hundreds of thousands, perhaps as many as two million more, who have written to Concern since we were founded in 1967 asking for a Living Will. A Living Will is a document enabling a person to indicate in writing his or her directions for treatment - or the withholding or withdrawing of treatment - during terminal illness. It states in part: "If...the situation should arise in which there is no reasonable expectation of my recovery from extreme physical or mental disability, I...ask that medication be mercifully administered to me to alleviate suffering even though this may shorten my remaining life." Hence, in appealing to this committee, I speak for millions of people who share the same fear: that of dying in excruciating and uncontrolled pain.

Is this fear groundless, as some will claim? Anyone who has cared for even one person dying from certain forms of cancer knows that it is not. When my mother was dying of cancer, my father, an internationally renowned physician who had cared for many dying women, contacted every known "expert" in the field of pain control and every available technique and medication, including hypnosis and nerve block surgery, were tried with only limited success. And yet a medication which might have been successful in controlling that pain - heroin - was not available in this country. Those who work in hospitals where over 70% of U.S. citizens now die know that too many of the almost two

million who die each year die in pain. Concern for Dying receives hundreds of letters each year similar to those presented in Mrs. Quattlebaum's testimony. Concern also has noted an alarming surge of interest in suicide among the elderly and terminally ill. It seems indisputable that one of the most compelling influences predisposing terminally ill persons to consider suicide is fear of uncontrolled pain.

Regulation of addictive products harmful to the body seems wise. But there are many, many addictive, dangerous drugs used every day for medicinal purposes. Let us agree that heroin is addictive (as are all opiate derivatives including morphine, the leading pain-control drug in the U. S.). What possible import can there be in the addiction of a person who suffers from a terminal illness when time is short and death is sure? There may be a miracle cure, some say. Yes, there is always a possibility. It is also possible to break an addiction. New York state alone was treating 27,000 drug addicts in 1979. If there are one or two heroin addicted people saved from death by miracle cures added to this list, is that not preferable to even one person dying in preventable agony? The danger of addiction, then, is a specious argument.

"Morphine is as effective as heroin", is another argument. To answer this statement, one need only refer to the testimony of Dr. Allan Mondzic or read the papers written by Dr. Robert Twycross and/or Dr. Cicely Saunders who, in caring for the dying in England where heroin is available for medicinal use, have found that heroin is the drug of choice in a small number of particularly painful illnesses. If there is only one person for whom heroin is the only effective drug, there is no excuse for not making it available.

We live, you and I, in a country which was founded on principles of freedom of choice and which prides itself on a system of government which upholds freedom of speech, freedom of religion, freedom from want and freedom from fear. Yet, in this country, unlike 85 others, Joan Robinson (about whose three year struggle with cancer a documentary was broadcast last January) had to ask her doctor if she would have to go to England to die without pain.

The fourth amendment right to privacy and the common law right to bodily self-determination have been held to include the right to refuse treatment, even life prolonging treatment. If a competent person has the right to refuse a blood transfusion or the removal of a respirator, should not a competent person have the right to receive medication of any kind which will effectively control pain? Surely, there should be a strong presumption against the restriction of a doctor's and patient's right to decide what is best for treatment of pain in a dying person.

Chairman Waxman, in your letter to Mrs. Quattlebaum inviting her to testify, you asked five specific questions. I, too, would like to answer those questions.

- 1) "What extent of cancer patients suffer from intractable pain and are not responsive to legal analgesics?" There is agreement that only a very small percentage of dying people suffer from intractable pain which is not responsive to legal analgesics. However, that small percentage must be translated into thousands of human beings. If the estimate is only 4%, we are speaking of close to 80,000 people; if it is only .2%, 4,000 people. If any one of these people has, does or will belong to you, you will know that one is too many.
 - 2) "Why do you believe heroin provides analgesic qualities which make it superior to drugs such as morphine or dilaudid?" Because many, if not most doctors to whom heroin is available, find, and have found for approximately 100 years, that it is the most effective analgesic in certain cases. If there was a drug as or more effective, would so many doctors prescribe heroin?
 - 3) "If heroin were to be approved for general therapeutic use, how should the drug be distributed?" Analgesics such as morphine, codeine, dilaudid, barbiturates such as seconal and nembutal, and many, many other effective but addictive drugs (alcohol, nicotine) are widely distributed in the U. S. Other even more deadly drugs (curare, potassium chloride) are also used medicinally. Heroin could surely be distributed in the same manner with the same precautions against abuse.
 - 4) "If legal analgesics were available in more concentrated dosage forms, do you believe there would still be a therapeutic need for heroin?" A puzzling question - if legal analgesics such as morphine were available in more concentrated (easily absorbed, quicker acting, more easily soluble, etc.) form, perhaps these new forms would become the drugs of choice in the treatment of intractable pain. However, this is not the case and there is a drug already more effective, more easily absorbed, more concentrated, quicker acting, more easily soluble, and without the debilitating side-effect of nausea. Why not make it available while we look for new drugs or new forms of existing drugs?
 - 5) "Do you have any suggestions as to how physicians or patients can become more knowledgeable about the treatment of pain? Can the Federal Government be of greater assistance in this regard?" This question is overly broad in that it asks about "treatment of pain" which may involve physical, emotional, financial, social pain. CONCENTR is involved only with treatment of pain for the dying and their families and even here we are concerned with a number of kinds of pain.
- What is needed is education - a recognition that as medical technology solves the problems of heart failure (pacemakers, surgery, CPE) and viral or bacterial

disease (antibiotics, etc.) an increasing number of people are going to live longer and die from progressive, debilitating and often very painful diseases. Pain control, including the studied use of any and all narcotics, must become a top priority in health care. The alternative is one we are already seeing - a tremendous growth in the numbers of people planning to commit suicide rather than submit themselves, and their families watching them and paying for them, to a paternalistic health care system more interested in prevention of potential abuse than in care of the individual. Can the Federal government be of greater assistance? YES!

1) Congress can begin by passing H.R. 7334 to authorize the use of heroin for dying people. (I see no reason to restrict its use to dying people with cancer but this is a beginning.)

2) A way must and can be found to cut through the red tape of the FDA so that medicinal forms of heroin in use for so many years in other countries can be made available in the U. S. without years and years of trials. We do not have time to reinvent the wheel when we are treating terminally ill men, women and children who are suffering.

3) I hesitate to suggest any program which will add to the federal budget but a Fulbright-type fellowship program which would send one senior staff physician from each medical school and teaching hospital to observe pain control methods in other countries might be helpful.

I do not believe that the main obstructions of effective pain control in this country are doctors and nurses. I think our federal regulations, based on fear of abuse and addiction, have created an inability to test, to innovate, to risk. The resulting apparent insensitivity to pain shown by health professionals and feared by millions contemplating dying in hospitals is a natural outcome of frustration caused by the inability to do what doctors and nurses are trained to do - cure, or if that is impossible - CARE.

It is up to Congress to provide sensible direction to the Executive by indicating in legislation that we will not tolerate unnecessary suffering any more than abuse of heroin.

Mr. WAXMAN. We are being called to the House floor to respond to a quorum which will be followed by a vote. After we have had an opportunity to vote and return, we will continue with the hearing.

[Brief recess.]

Mr. WAXMAN. Our next witness is Dr. Jane E. Henney, special assistant for clinical affairs, division of cancer treatment, National Cancer Institute.

Prior to joining NCI, Dr. Henney participated in a clinical fellowship in oncology at the M. D. Anderson Hospital in Houston, Tex.

Accompanying Dr. Henney is Dr. William T. Beaver, professor of pharmacology at the Georgetown Medical Center.

Dr. Beaver has experience in the field of pain management and is the principal investigator on one of this country's first controlled studies of heroin's analgesic properties.

Dr. Beaver does not appear representing NCI, or the Georgetown Medical Center, but has volunteered to respond to questions concerning his professional experience with heroin's use in the treatment of terminally ill patients.

STATEMENT OF JANE E. HENNEY, M.D., SPECIAL ASSISTANT FOR CLINICAL AFFAIRS, NATIONAL CANCER INSTITUTE, NATIONAL INSTITUTES OF HEALTH, PUBLIC HEALTH SERVICE, DEPARTMENT OF HEALTH AND HUMAN SERVICES, ACCOMPANIED BY PAUL DAVIGNON, CHIEF, PHARMACEUTICAL RESOURCES BRANCH, DIVISION OF CANCER TREATMENT (NCI); WILLIAM T. BEAVER, M.D., PROFESSOR OF PHARMACOLOGY, GEORGETOWN UNIVERSITY SCHOOLS OF MEDICINE AND DENTISTRY

Mr. WAXMAN. Dr. Henney, I understand you have a prepared statement. Without objection, it will be printed in its entirety in the record. [See p. 108.]

I would like to ask you to please summarize your testimony so we can allow the members greater opportunity for questions.

Dr. HENNEY. Mr. Chairman, members of the committee, it is my pleasure to appear before you today and my privilege to represent the National Cancer Institute.

I have accompanying me another gentleman, Mr. Paul Davignon, chief of our pharmaceutical resources branch in the division of cancer treatment of the National Cancer Institute.

The Institute's responsibilities in the area of cancer treatment deal not only with discovering and developing effective therapies for the cancer patient's disease but also with supporting and nurturing interest and activities in the empathic management of the cancer patient, whether or not the patient is undergoing active treatment.

I will focus primarily on those activities of the NCI that are related to pain management, but would also stress that this is but one facet of the Cancer Institute's efforts to assist cancer patients and their families in coping with cancer.

To many Americans, the word cancer elicits a response of fear. A Gallup poll conducted in 1976 revealed that cancer is one of the chief concerns of the American public. This fear has many facets—fear that even if therapy is available, the disease will eventually

return, or that the therapies, if they can be offered, may be worse than the disease.

Finally, the patient fears that if these therapies fail, he or she may suffer an excruciatingly painful and lingering death.

How many of these fears are real and how many are myths needs to be better understood. The first fear I alluded to was that patients fear the return of cancer even if therapy is available. It is clear that of the approximately 1 million Americans who are diagnosed with the more serious forms of cancer each year, at least 41 percent can be expected to be alive and well and free of their cancer 5 years from the diagnosis and can thus be considered cured—with little reason to anticipate that the original disease will return.

Although many current treatments are effective, they are still too toxic and elicit the second fear that patients have, that of fear of the therapy itself.

The National Cancer Institute is undertaking many efforts to reduce the toxicity experienced by patients while retaining effective therapy.

Let me now address the final fear that I had mentioned, as I know it is the major interest to the committee today. It appears to be a commonly held belief that all cancer patients experience unbearable pain.

A prominent specialist in the area of pain at one of the Nation's leading cancer centers has observed that only 33 percent of the patients at this center have pain that requires the administration of any drug therapy.

Many causes of cancer pain can be managed without narcotics, but if narcotics are required for relief from the pain, adequate pain control is achieved in 90-95 percent of the patients. This is not an isolated experience but representative of what has been reported by others.

The subject of this hearing, heroin, has been proposed by some as an alternative, not only for these patients, but also for the patients who may not be able to take medications by mouth, and who also have wasted muscles that make giving frequent injections difficult, particularly if the drug that is given requires a large volume of liquid to dissolve the drug.

What are the data with regard to heroin? Can it fulfill either of these needs?

Clearly heroin is a powerful pain reliever, but studies done in England, where heroin taken by mouth in addition to other medications was first popularized, indicate that heroin is no more effective than morphine.

For this reason, both the British and the Canadians have abandoned the oral form of heroin.

The injectable or parenteral form of heroin is currently undergoing tests in this country by Dr. Houde and his coworkers at the Memorial Sloan-Kettering Cancer Center in New York and by Drs. Beaver and Schein at Georgetown University here in Washington, D.C.

The former trial is comparing the relative merits of heroin versus morphine in two populations of patients—those who have pain following surgery and cancer patients who have pain.

The trial being conducted by Dr. William Beaver at Georgetown tests heroin versus morphine only in the cancer population. This study is ongoing but preliminary results indicate that heroin is approximately 2.5 times more potent than morphine in a milligram-to-milligram basis but equivalent in other parameters such as pain relief, side effects, and patient acceptability.

The results in summary from Dr. Beaver's study as well as Dr. Houde's study indicate that parenterally administered heroin appears no worse or no better than morphine and would seem to be equivalent with regard to both its pain-relieving qualities and side effects.

Dr. Beaver, I am sure, could expand upon those results.

This then leads to the final advantage that has been advocated for heroin, that it is more soluble in solution and, therefore, less volume needs to be given per injection to patients who already must suffer from their primary disease.

This situation is, Mr. Chairman, very real and the advantage for heroin over morphine in this setting cannot be denied. This advantage was apparent to staff at the National Cancer Institute, but we were also well aware of the difficulties that would need to be overcome if heroin were to be made available solely for this purpose.

The staff in our pharmaceutical resources branch has pursued an alternative path—that of enhancing the solubility of morphine.

They have been quite successful, for they have developed a very soluble and stable morphine compound. The results of their work will soon be published in the journal of the American Medical Association. The drug that these investigators developed is a freeze-dried—lyophilized—morphine acetate salt. Even if the patient requires exceedingly high doses of morphine, this can be administered in less than 1 milliliter of fluid. Mr. Paul Devignon would be happy to answer questions relative to this or the many other projects his laboratory has undertaken with regard to both heroin and morphine.

As I have mentioned to you, much of the pain experienced by cancer patients is treatable with the narcotic agents that are now available to physicians.

Unfortunately, there is often a lack of appreciation by health professionals as to how these drugs can be used most effectively to treat pain. It appears that there is a gap in the education of health professionals of all disciplines regarding the complexities of pain and the proper prescribing practices for both nonnarcotic and narcotic analgesics.

Recent editions of medical and nursing texts and journals are attempting to correct this deficit but it has been a slow process, particularly for those who are suffering now.

The National Cancer Institute has undertaken other projects relative to pain management and I would like to describe those for you. We are currently field testing the concept that pain control for the cancer patient is best instituted early in its onset by the careful planning, evaluation, and care of a team of health professionals.

The Institute is also supporting investigator-initiated research which will give us better information as to the basic mechanism

cause pain and will hopefully point us in the direction of other ways not only to control pain but also to prevent it from arising.

Patients and their families need information and education to help them cope with pain. To this end, the National Cancer Institute will be supporting the publication of a handbook entitled "Living With Pain."

This material will be similar to a handbook that has been developed with our support by the Yale Comprehensive Cancer Center. We will be field testing this booklet this year and intend to make the material widely available once this is completed. This booklet contains material describing not only the range of drug therapies that are helpful but also many techniques that can be used by the patient to control pain.

We are also providing information relative to pain management as well as where a patient can go for help through our cancer information service.

Our telephone service is operational in 32 States, plus the District of Columbia, and serves as a source of information on a variety of subjects related to cancer. All other States have access to a central toll-free telephone service which provides similar information.

Finally, the Cancer Institute has been an active participant in the Interagency Committee on Pain and Discomfort. This committee has focused on facilitating and integrating the work done by a wide variety of Federal agencies that have a commitment to provide relief from suffering, no matter what the disease cause, and to identify gaps that remain in either the knowledge base or services delivered.

Again I thank the committee for this opportunity. I will be glad to answer any questions.

(Testimony resumes on p. 115.)

Dr. Henney's prepared statement follows:]

STATEMENT

BY

JANE E. HENNEY, M.D.

NATIONAL CANCER INSTITUTE

Mr. Chairman, Members of the Committee: I am Dr. Jane E. Henney, Special Assistant for Clinical Affairs, Division of Cancer Treatment of the National Cancer Institute. It is my pleasure to appear before you today and my privilege to represent the National Cancer Institute. I have accompanying me, Mr. Paul Davignon, Chief of the Pharmaceutical Resources Branch, Division of Cancer Treatment of the National Cancer Institute. The Institute's responsibilities in the area of cancer treatment deal not only with discovering and developing effective therapies for the cancer patient's disease but also with supporting and nurturing interest and activities in the empathic management of the cancer patient... whether or not the patient is undergoing active treatment.

I will focus primarily on those activities of the NCI that are related to pain management but would also stress that this is but one facet of the Cancer Institute's efforts to assist cancer patients and their families in coping with cancer. (I would like to make available for the record, and the committee's review, materials that have been developed by the Institute dealing with other problems and circumstances that the patient and his or her family face.)

To many Americans, the word cancer elicits a response of fear. A Gallup Poll conducted in 1976 revealed that cancer is one of the chief concerns of the American public. One thousand five hundred and forty-eight men and women were surveyed; 58 percent of the persons interviewed stated that cancer was the disease they feared most; this was followed by blindness, 21 percent and heart disease, 10 percent. This fear has many facets--

-2-

fear that even if therapy is available, the disease will eventually return, or that the therapies, if they can be offered, may be worse than the disease. Surgery is threatening, for many fear it will be mutilating. Radiation is psychologically threatening, for it can neither be seen nor felt. Chemotherapy, like radiotherapy, is accompanied by the unpleasant side effects of nausea, vomiting, or hair loss. Finally, the patient fears that if these therapies fail, he or she may suffer an excruciatingly painful and lingering death.

How many of these fears are real and how many are myths needs to be better understood. The first fear I alluded to was that patients fear the return of cancer even if therapy is available. It is clear that of the approximately one million Americans who are diagnosed with the more serious forms of cancer each year, at least 41 percent can be expected to be alive and well and free of their cancer five years from the diagnosis and can thus be considered "cured"...with little reason to anticipate that the original disease will return. Ninety-five percent of the additional 400,000 Americans who are diagnosed each year with either skin cancer or in situ cervical cancers are curable.

Although many current treatments are effective, they are still too toxic and elicit the second fear that patients have--that of fear of the therapy itself. The National Cancer Institute is undertaking many efforts to reduce the toxicity experienced by patients while retaining effective therapy. By the utilization of more sophisticated radiation equipment, by making important modifications of parent drugs, by developing new drugs and biologicals made of naturally occurring substances, we can

reasonably expect treatment of the future to be less toxic. The Cancer Institute, in addition to its pursuit of developing anticancer drugs, is also testing and then making available drugs that are helpful in relieving some of the side effects of chemotherapy, even if these drugs do not have any effect on the tumor, such as anti-nausea and -vomiting drugs called antiemetics.

Let me now address the final fear that I had mentioned, as I know it is the major interest to the committee today. It appears to be a commonly held belief that all cancer patients experience unbearable pain. However, a prominent specialist in the area of pain at one of the nation's leading cancer centers has observed that only 33 percent of the patients at this cancer center have pain that requires the administration of any drug therapy. Many causes of cancer pain can be managed without narcotics, but if narcotics are required for relief from the pain, adequate pain control is achieved in 90-95 percent of the patients. This is not an isolated experience but representative of what has been reported by others. Although this degree of effective pain relief is laudable, it is not 100 percent, and for those patients who are not effectively treated with currently available drugs, alternatives need to be identified and made available. The subject of this hearing, heroin, has been proposed by some as an alternative, not only for these patients but also for the patients who may not be able to take medications by mouth, and who also have wasted muscles that make giving frequent injections difficult, particularly if the drug that is given requires a large volume of liquid to dissolve the drug.

What are the data--with regard to Heroin (or Diamorphine, as it is called by its chemical name)-- can it fulfill either of these needs? Clearly, heroin is a powerful pain reliever, but studies done in England, where heroin taken by mouth in addition to other medications was first popularized, indicate that heroin is no more effective than morphine. For this reason, both the British and the Canadians have abandoned the oral form of Heroin. The injectable or parenteral form of heroin is currently undergoing tests in this country by Dr. Houde and his co-workers at the Memorial Sloan Kettering Cancer Center in New York and by Drs. Beaver and Schein at Georgetown University here in Washington, D.C. The former clinical trial is comparing the relative merits of heroin versus morphine in two populations of patients...those who have pain following surgery and cancer patients who have pain. Results of the study conducted in the post-operative patients indicate that heroin and morphine sulfate are equivalent in their pain-relieving qualities but that heroin is more potent when one considers a milligram to milligram comparison of the two drugs. In addition, heroin appears in these studies to have a more rapid onset and shorter duration of action. The second study which was conducted in cancer patients has produced similar results. The trial being conducted by Dr. William Beaver at Georgetown tests heroin versus morphine only in the cancer population. This study is ongoing but preliminary results indicate that heroin is approximately 2.5 times more potent than heroin in a milligram to milligram basis but equivalent in other parameters such as pain relief, side effects and patient acceptability. The results in summary indicate that parenterally administered heroin appears

no worse than morphine and would seem to be equivalent with regard to both its pain-relieving qualities and side effects.

This then leads to the final advantage that has been advocated for heroin--that it is more soluble in solution and, therefore, less volume needs to be given per injection to patients who already must suffer from their primary disease. This situation is, Mr. Chairman, very real and the advantage for heroin over morphine in this setting cannot be denied. This advantage was apparent to staff at the National Cancer Institute, but we were also well aware of the difficulties that would need to be overcome if heroin were to be made available solely for this purpose. The staff in our Pharmaceutical Resources Branch has pursued an alternative path--that of enhancing the solubility of morphine. They have been quite successful, for they have developed a very soluble and stable morphine compound. The results of their work will soon be published in the Journal of the American Medical Association. The drug that these investigators developed is a freeze-dried (lyophilized) morphine acetate salt. Even if the patient requires exceedingly high doses of morphine, this can be administered in less than 1 milliliter of fluid. Mr. Paul Davignon, would be happy to answer questions relative to this or the many other projects his laboratory has undertaken with regard to both heroin and morphine.

As I have mentioned to you, much of the pain experienced by cancer patients is treatable with the narcotic agents that are now available to physicians. Unfortunately, there is often a lack of appreciation by health professionals as to how these drugs can be used most effectively

to treat pain. It appears that there is a gap in the education of health professionals of all disciplines regarding the complexities of pain and the proper prescribing practices for both non-narcotic and narcotic analgesics. Recent editions of medical and nursing texts and journals are attempting to correct this deficit but it has been a slow process, particularly for those who are suffering now.

The National Cancer Institute has undertaken other projects relative to pain management and I would like to describe those for you. We are currently field-testing the concept that pain control for the cancer patient is best instituted early in its onset by the careful planning, evaluation, and care of a team of health professionals. The Institute is also supporting investigator-initiated research which will give us better information as to the basic mechanism(s) that cause pain and will hopefully point us in the direction of better ways not only to control pain but also to prevent it from occurring.

Patients and their families need information and education to help them cope with pain. To this end, the National Cancer Institute will be supporting the publication of a handbook entitled "Dealing with Pain." This material will be similar to a handbook that has been developed with our support by the Yale Comprehensive Cancer Center. We will be field testing this booklet this year and intend to make the material widely available once this is completed. This booklet contains material describing not only the range of drug therapies that are helpful but also many techniques that can be used by the patient to control pain. We are also providing information relative to pain management as well as

where a patient can go for help through our cancer information service. This telephone service is operational in 32 states, plus the District of Columbia, and serves as a source of information on a variety of subjects related to cancer. All other states have access to our central toll-free telephone service which provides similar information.

Finally, the Cancer Institute has been an active participant in the Interagency Committee on Pain and Discomfort. This Committee has focused on facilitating and integrating the work done by the wide variety of Federal agencies that have a commitment to provide relief from suffering, no matter what the disease cause, and to identify gaps that remain in either the knowledge base or the services delivered. There have been many specific activities related to pain, sponsored as a result of the agencies working together. A partial listing of these activities would include receiving expert opinion in both the pharmacologic and nonpharmacologic management of pain at many of its meetings, sponsoring a National meeting on "Pain Discomfort and Humanitarian Care" in February of 1979, and initiating the clinical studies to test the relative merits of heroin versus morphine.

Again, I thank the Committee for this opportunity; I will be glad to answer any questions.

Mr. WAXMAN. Thank you very much for your testimony.

To what extent does the incidence of intractable pain result of improper administration of analgesics and why do physicians misuse analgesics?

Dr. HENNEY. Did you say the improper use of analgesics?

Mr. WAXMAN. Yes.

Dr. HENNEY. I think perhaps the biggest problem we face is something I mentioned during the latter part of my testimony. That is reeducating physicians and other health professionals about how to use the analgesics that are available to them in better ways.

Any improper use was likely a result of prescription habits learned early in our medical career where many of us were taught to prescribe narcotics on a p.r.n. basis, or only when a patient would call for the analgesic.

We know now the pain and chronic pain in particular does cycle, and we ought to precede that cycle with a narcotic and give it on a regularly scheduled basis rather than administer the drug after the pain has already occurred.

Mr. WAXMAN. We heard reports this morning of extreme human suffering. As a representative of the National Cancer Institute, to whom do you recommend these patients turn for assistance? Greater educational efforts can't be the complete answer.

Your statement outlines the difficulties of altering in the short term, the prescribing practices of physicians.

Do you suggest the patients change doctors? To whom should they turn?

Dr. HENNEY. I think many times when physicians are having difficulty, the problems are in knowing just how to approach a patient who has a pain problem; they often seek help from a pain specialist, one such as Dr. Beaver. I do not think that the majority of patients require a subspecialist's expertise when education of the nonspecialist could result in more effective management practices. Although the educational process has been slow over the past few years is now turning around on a fairly rapid basis.

I believe one of the previous witnesses mentioned the symposium on pain management sponsored by the American Society of Clinical Oncologists is evidence that educational opportunities to learn appropriate pain management practices are increasing.

I might also mention that the Journal of the American Medical Association will be publishing a three-part series this fall on the proper use of narcotics and other analgesics that are available to the oncologist. This is a part of their series on the treatment and care of the cancer patient.

Mr. WAXMAN. Do you believe that morphine acetate is a realistic short-term solution to the need of patients requiring a highly soluble injectable analgesic, and are there other alternatives available?

Dr. HENNEY. I think there are other alternatives that would probably also require at least minor changes in their current formulation. I think dilaudid has been mentioned here this morning. Certainly methadone an analgesic which is longer acting would also be appealing.

I think each of those would require minor formulation changes from the presently marketed product, but this could be done. It would not take an exceedingly long time to do so.

Mr. WAXMAN. Would heroin be an appropriate candidate for placement in NCI's group C plan? Please describe the group C plan as it relates to NCI's distribution of THC capsules and how could this process be used if a decision was made to pursue similar nationwide research activities with heroin?

Dr. HENNEY. Our group C designation is a descriptive term used by the National Cancer Institute, to identify portions of its drug distribution program. Drugs that are in group A are those anticancer agents that are just undergoing toxicity testing. Those in group B are those undergoing efficacy testing. Those in group C are ones that have shown effectiveness in the treatment of cancer in some disease sites but for one of a variety of reasons have not been picked up by a pharmaceutical house for marketing and distribution to practicing physicians.

For many years we have used this system to make available on a wider basis our anticancer agents to the practicing oncologists we have recently added the compound THC, to this group so that a broader base of physicians would be able to prescribe it for their chemotherapy patients who had nausea or vomiting refractory to marketed drugs.

We use group C for a drug only if it has already been proven effective. THC had proven to be effective in situations where marketed compounds were in effective.

In other words, it was superior to what physicians already had available, and so we felt strongly that we did need to use this mechanism to make THC widely available.

I think heroin presents a little bit different situation for us because in the clinical studies that we have conducted that I have just described, what we are seeing is that heroin is essentially equivalent to a compound that is already on the market.

So although our distribution system could be used to distribute heroin it is not typically the kind of drug we would use the group C distribution system for.

Mr. WAXMAN. Dr. Beaver, do you believe the clinical trials you have conducted at Georgetown Medical Center are sufficient to determine the effectiveness of heroin in the treatment of highly tolerant patients?

Dr. BEAVER. We have avoided the use of very highly tolerant patients in these studies because we are using a limited dose range of morphine and heroin. Highly tolerant patients would get very little relief from either of the doses we are using.

Mr. WAXMAN. Did you experience any significant difficulty in recruiting volunteers to participate in the clinical trials involving heroin?

Mr. BEAVER. I wouldn't say it was a significant difficulty other than certain of the problems you run into in any kind of a controlled clinical trial of an investigational drug. Of course, heroin—particularly among certain patient groups—has a very bad reputation. What we have noted, by a nurse observer, was that we have a fair black population of cancer patients at Georgetown. Many of these patients have very bad feelings about heroin. They would

agree in general to participate in the study and then we said, well, the study drug we are looking at now is heroin, and they would decline at that juncture. They had a bad feeling about it.

Mr. WAXMAN. Do you believe heroin presents a greater abuse potential than other available narcotic analgesics?

Dr. BEAVER. No; the reason heroin was outlawed in the first place was essentially due to certain clinical pharmacologic misconceptions.

I don't know of any people who are professional clinical pharmacologists in the area of narcotic drugs who currently believe that heroin, when used in a medical context, has any abuse or dependence liability that is measurably greater than any other potent injectable narcotic drug.

Mr. CARTER. Mr. Chairman, if you would yield.

Mr. WAXMAN. I would be pleased to yield.

Mr. CARTER. Then why do we find heroin on the street and not morphine?

Dr. BEAVER. Well, if you have a kilogram of morphine, you can get a certain number of bangs out of it, shots.

Now, if you simply take that kilogram of morphine and acetylate it, which is a project that any first-year organic chemistry student could carry off with even a very high yield, you immediately increase the potency of it by about a factor of three or so. So you get three times as many fixes out of your kilo.

Second, heroin is a much more compact material than morphine. Morphine is very bulky material. If you are trying to smuggle something into the country, you like to smuggle something that is as compact as possible and, therefore, you can get most of it in a small volume.

Third, if you inject these drugs intravenously, which is a route that isn't used terribly often in legitimate medical use—occasionally, but not very often—some addicts can perceive a difference between heroin and morphine.

Some express a preference for heroin, but some also express a preference for morphine.

So I don't know of good evidence, other than anecdotal evidence, that heroin really has a greater dependence liability.

When they started doing controlled studies of this issue down at Lexington—

Mr. CARTER. That is one place—

Dr. BEAVER. Down at Lexington, Drs. Martin, Jacinski, and various others have looked at heroin and compared it with other drugs over the years on a double blind basis to avoid the influence of bias from the observer in the subject, and so on—and this is, of course, how we do our studies at Georgetown.

Mr. CARTER. What was the rate of recidivism there?

Dr. BEAVER. This didn't go to recidivism. What it went to was comparing heroin and morphine.

Mr. CARTER. What was the rate of recidivism?

Dr. BEAVER. It is very high in heroin addicts, but this is true in the case of people addicted to any potent narcotic.

Mr. CARTER. I rather doubt that. I think heroin is much more addictive. Heroin addicts will not quit.

Dr. BEAVER. The vast majority wouldn't.

Mr. CARTER. That is the universal answer.

I talked with people and studied with people, the leading departments of pharmacology throughout our country, on this. This has been—not only that, we observed the use in England of heroin by addicts. There is no question in my mind.

I would have to see many double blind studies to prove to me that it is less addictive or no more addictive than morphine.

I don't think the Harrison Act would have ever been passed in 1914. They didn't do that without any reason at all.

Thank you, Mr. Chairman.

Mr. WAXMAN. Dr. Beaver, could you explain in layman's terms the difference between addiction as it relates to drug abuse and the development of tolerance as it relates to the use of analgesics by cancer patients?

Dr. BEAVER. Addiction—and it is really rather a bad term. It is—different people use it to mean different things, but the key point of addiction is the development of psychic dependence on a drug. That is a compulsive desire to keep taking a drug, to experience its effects on mood. It makes you feel good. It makes you feel high.

Another phenomenon is the development of tolerance or physical dependence. My own experience is that very few terminal cancer patients become addicted to narcotics in the sense that they develop psychic dependence. They are taking the drug because they have pain. If we can find a way of relieving the pain other than the use of narcotics, it is no problem to detoxify them whatsoever.

A few become psychically dependent as well. It is this lack of an understanding of the distinction between the street addict situation on the one hand of people shooting heroin, having nothing to do with the medical use of narcotics, and the myth of the advanced cancer patient on the other hand who is using these drugs for their pain-relieving property that has probably led to more of a problem in providing adequate pain relief for these patients than any other.

Not only are laymen confused about this, but physicians and nurses are confused about it.

They react to the cancer patient who needs larger and larger doses and is developing tolerance. Their reactions are tinged with what their reactions would be to a street addict running around hitting people over the head to buy heroin to fuel a habit.

Mr. WAXMAN. What is the largest analgesic dose you found necessary to use?

Dr. BEAVER. The largest dose I have ever given a patient was at the House of Calvary, Calvary Hospital, which is a terminal care cancer center in New York.

I had a patient I was giving 5 grains of morphine to about every 2 to 3 hours, which is about 360 milligrams of the drug. It was a gigantic dose. It would kill any one of us.

Mr. WAXMAN. What percentage of cancer patients you come into contact with require drug therapy for the relief of pain?

Dr. BEAVER. The majority at some time or other in their course. However, a certain number of these one can control right up to the end with more mild analgesics, aspirin-like agents, orally, oral combination products with small amounts of narcotics and the like.

Then there is a subgroup that requires potent injectables.

Mr. CARTER. Mr. Chairman, on that I would just say this: The terminally ill cancer patient, who is having severe pain, aspirin-like substances in my opinion have little effect, and I am reminded of what a Johns Hopkins professor, Dr. Jim McElroy—who is a graduate of Johns Hopkins—told me about the use of such substances.

He said, "You might as well urinate in the patient's ear as to give him something like that."

Dr. BEAVER. I know you expressed an interest in zomepirac previously. Zomepirac is, in fact, an aspirin-like substance.

Mr. CARTER. Well, have you had any experience with it? Does it do what they say it will?

Dr. BEAVER. Well, yes. I chaired a symposium, a 2-day symposium on the drug in Atlanta last year which all of the investigators who have done work with it presented the results of their research.

I think it is a very impressive drug.

Mr. CARTER. Is it as effective as morphine?

Dr. BEAVER. It is, at least in post-operative patients, patients with post-operative pain. It has not been compared with morphine in patients with cancer pain to my knowledge.

Mr. CARTER. Is it addictive?

Dr. BEAVER. No.

Mr. CARTER. Great. Great. I think we should continue with the experimentation.

Thank you, Mr. Chairman.

Mr. WAXMAN. What about methadone? Do you feel it to be effective in the treatment of cancer patients?

Dr. BEAVER. We use a lot of it, mainly by the oral route. It has excellent oral efficacy.

In terms of potency by injection, it is about equal to morphine. The solubility is not much better. It has the same limitations in terms of injection.

Mr. WAXMAN. Well, I thank you very much, Dr. Henney, Dr. Beaver, for your testimony. It was very helpful to us.

Without objection, I ask that a letter from Dr. Raymond W. Houde of the Memorial Sloan-Kettering Cancer Center be printed in the record at this point.

[The letter referred to follows:]

MEMORIAL SLOAN-KETTERING CANCER CENTER

1275 YORK AVENUE, NEW YORK, NEW YORK 10021

(212) 794-7693

August 15, 1980

The Honorable Henry A. Waxman
 Chairman, Subcommittee on Health
 and the Environment
 House of Representatives
 Congress of the United States
 Rayburn House Office Building Room 2415
 Washington, D.C. 20515

Dear Mr. Waxman:

First, I wish to apologize for this late reply to your letter of June 15th which arrived while I was away. I have, however, expressed my opinions on the therapeutic merits of heroin to Ripley Forbes of your Subcommittee staff in a recent telephone conversation. This letter is intended to confirm in writing the substance of what I had stated verbally to Mr. Forbes.

Much of what I shall say is based on the results of studies of heroin being conducted here at the Memorial Sloan-Kettering Cancer Center as a part of ongoing research on the analgesic efficacy and relative advantages or disadvantages of drugs for the relief of pain and suffering of patients with cancer. We are evaluating heroin by means of a series of double blind, controlled clinical drug trials designed to assess the relative analgesic potency, side effect liability, and effects on mood of parenterally administered heroin and morphine in two groups of patients: in patients with postoperative pain following potentially curative cancer surgery and in patients with pain due to advanced or metastatic cancer. Studies are also underway of the relative potency and side effect liability of orally administered heroin as compared to intramuscularly administered heroin, and of how heroin is absorbed, distributed, metabolized and eliminated from the body.

Although our studies of heroin are still in progress, some have progressed to the point of allowing comparisons with what is already known from the literature about heroin, and with our own prior experiences with other narcotic analgesics which have been studied in a similar manner in cancer patients of this hospital.

Both in the postoperative patient group and in the advanced cancer patients, the results of our studies, thus far, are consistent with the reports in the literature that heroin is approximately twice as potent as morphine on a milligram basis, and that its effects are more prompt and of shorter duration than those of morphine. In these respects, heroin closely resembles another currently available narcotic, hydromorphone, which is perhaps better known by its proprietary designation, Dilaudid. Like heroin, hydromorphone is also much more soluble in water than morphine and, in our studies, hydromorphone was found to be over

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six times as potent as morphine.

If I may digress a bit, I should like to explain our use of the term 'analgesic potency'. To pharmacologists, potency is merely an expression of the amount of a drug which would produce a given effect. Thus, the relative analgesic potency of two drugs, such as heroin and morphine, simply defines the ratio of doses of the two drugs which produce a specified level of pain relief. As it is not possible to obtain complete pain relief in all patients without producing undesired adverse effects, it is our practice to define the level of pain relief in terms of customarily employed doses of our reference standard drug, morphine. Graded doses of both the test drug and the standard drug are assayed and, in all of our studies of potent narcotics, the comparisons are all made within the effect range of 8 and 16 mg intramuscular doses of morphine sulfate. Our primary reason for conducting relative analgesic potency assays in this manner is to provide some assurance that comparisons of the incidence and severity of side effects are being made at equianalgesic dose levels of the test drug and a common reference standard.

To return to the results of our studies with heroin, we have not found any significant differences from morphine in either the type, incidence or intensity of side effects. Among the postoperative patients, both euphoric and dysphoric side effects were noted somewhat more frequently after heroin than after equianalgesic doses of morphine, but the differences were small and statistically insignificant. The effects of the drugs on mood were also assessed by adjective checklist questionnaires and by non-verbal visual analog techniques, and they too showed no significant differences between heroin and morphine. Both drugs improved mood in patients who were despondent and depressed, and both tended to have the opposite effects in patients who were more outgoing and active. As might have been expected, almost all of the advanced cancer patients were in the former group, but the predominant effects of both heroin and morphine were in the direction of improved mood even among the post-operative patients. I should add that the improvement in mood recorded was directly correlated with the degree to which the medication was reported to relieve pain.

In the study in which orally administered heroin is being compared to intramuscularly injected heroin in the same patient, our results are again similar to what we had previously observed with morphine. Heroin, like morphine, is considerably less potent as an analgesic when administered by mouth as compared to when it is given by injection. In our earlier studies, we had found that over six times as much orally administered morphine sulfate was necessary to produce the same total analgesic effect as an intramuscularly administered dose, and our results, thus far, indicate that the ratio is at least as great, and possibly even greater, for heroin. The major portion of an orally administered dose of morphine is known to be metabolically inactivated by glucuronide conjugation as it traverses the gut wall and the liver bed before entering the blood stream to be carried to its sites in the central nervous system to exert its analgesic effects. Since it has been found that heroin is rapidly deacetylated to 6-monoacetylmorphine, and thence to morphine, it is not at all surprising that orally administered heroin is being found to be subject to the same fate as orally administered

morphine.

Nevertheless, Dr. Cicely Saunders and her British colleagues have had undeniable success with orally administered solutions of heroin and the heroin-containing Brompton Cocktail in controlling pain and suffering in the terminally ill cancer patient. In the light of Dr. Robert Twycross's later studies at St. Christopher's Hospice in London, it is now evident that the key to success is in the way in which the drugs are used rather than in the choice of heroin as the analgesic: At St. Christopher's patients in pain receive their oral narcotic analgesic on a regular four-hourly schedule around-the-clock. The doses of heroin are individually titrated for each patient, an attempt being made to prevent pain from occurring or becoming severe. The more customary practice in this country, and elsewhere, is not to give narcotic analgesics unless the patient complains of severe pain. At St. Christopher's, the staff have no compunctions about giving doses as high as 100 mg or more of heroin or morphine on a four-hourly schedule, if that is what is needed to control pain, and they have shown that this can be done without rendering the patient insensible.

Dr. Twycross's study comparing heroin to morphine in a Brompton Mixture (reported in the journal *PAIN* Vol. 3, pp. 93-104, 1977) showed that oral morphine, in doses only one and one-half times those of heroin, was at least as effective as heroin. In later studies, Dr. Twycross also questioned the automatic inclusion of cocaine, alcohol, syrup and phenothiazines so that, now even at St. Christopher's, a simple aqueous solution of morphine is being used as the basic oral analgesic. Adjuvant medication is prescribed selectively, as need to control other symptoms such as nausea and vomiting, constipation, anxiety and depression.

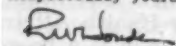
In the article mentioned above, and in other publications, Twycross has stated that the most important practical advantage of heroin over morphine is that as its hydrochloride salt, heroin is considerably more soluble in water than morphine sulfate or any of the other morphine salts which are stable in solution and can be used for parenteral medication. As he asserts, the volume of solution that can be injected repeated in cachectic patients with little muscle mass can be an even more limiting factor than the adverse pharmacologic effects of the drugs in narcotic tolerant terminally ill patients. If one were to consider resolving this problem solely on the basis of a drug's solubility in water and analgesic potency, hydromorphone hydrochloride (Dilaudid) has the same desirable attributes as heroin hydrochloride and, as mentioned above, it is very similar to heroin in its time-course of action and other pharmacological properties. Hydromorphone hydrochloride is approximately five times as soluble as morphine sulfate but over six times as potent as a parenteral analgesic; heroin hydrochloride is ten times as soluble as morphine sulfate but only twice as potent as analgesic.

The real problems of being able to control intractable pain of terminally ill patients with parenteral analgesics are, however, related to how the drugs are made available and why physicians often do not use them

to best advantage. Presently, most parenteral narcotic analgesics are available only in maximal fixed concentrations in which one milliliter is equianalgesic to 10 to 15 mg of morphine sulfate. Even the maximal available concentration of hydromorphone hydrochloride permits only a doubling of that dose without having to increase the volume for injection. No other parenteral analgesics are available to American physicians in more effective concentrations. In the preterminal stages of advanced cancer, many patients are unable to take or retain their analgesic medication except by injection, and those who have become very tolerant to narcotics may require several times the usual dose of the drug to obtain pain relief. It is these patients who suffer from the unavailability of injectable narcotics in suitable concentrations for practical administration, and from the unavailability of freeze dried preparations such as they have in Great Britain which allow for more flexibility in individually tailoring the dose and volume of the injectable narcotic to the patient's needs.

In closing, I think it should be said that no analgesic drug is a panacea. Perhaps the greatest harm that could come from introducing heroin into medical practice is the belief that it is one, so that more appropriate care and attention of the suffering patient are neglected.

Respectfully yours,



Raymond W. Houde, M. D.
Chief, Analgesic Studies Section

Mr. WAXMAN. We have another call to the House floor for the purpose of a vote. I would like to have us return at 1 o'clock to continue the hearing. We have a vote on the previous question on the rule which may well then be followed by another vote.

I think it would make sense, rather than being interrupted twice in the next hour, to come back at 1 p.m. and complete the hearing for the day.

So we will recess until 1 o'clock.

[Whereupon, at 11:50 a.m., the subcommittee was recessed, to reconvene at 1 p.m., the same day.]

AFTER RECESS

[The subcommittee reconvened at 1 p.m., Hon. Henry A. Waxman, chairman, presiding.]

Mr. WAXMAN. I would like to ask our next two witnesses—Dr. Nightingale and Mr. Haislip—to come up together. Dr. Stuart Nightingale, is Acting Associate Commissioner for Health Affairs of the Food and Drug Administration. Dr. Nightingale is a board certified internist and has been with the FDA since 1976.

Prior to joining FDA, Dr. Nightingale served at the National Institute on Drug Abuse as Director of the Division of Resource Development.

Mr. Gene R. Haislip is Director of the Office of Compliance and Regulatory Affairs of the Drug Enforcement Administration. Mr. Haislip was appointed to his current position following the retirement of Kenneth Durrin and previously served as Executive Assistant to Peter Bensinger, Administrator of the DEA.

I would like to welcome both of you. We have copies of your prepared statements which we will be pleased to place in the record in their entirety.

I would like to ask you to summarize your statements so that we can get into questions and answers.

STATEMENTS OF STUART L. NIGHTINGALE, M.D., ACTING ASSOCIATE COMMISSIONER FOR HEALTH AFFAIRS, FOOD AND DRUG ADMINISTRATION, PUBLIC HEALTH SERVICE, DEPARTMENT OF HEALTH AND HUMAN SERVICES; AND GENE R. HAISLIP, DIRECTOR, OFFICE OF COMPLIANCE AND REGULATORY AFFAIRS, DRUG ENFORCEMENT ADMINISTRATION, DEPARTMENT OF JUSTICE

Dr. NIGHTINGALE. I am Dr. Stuart L. Nightingale, Acting Associate Commissioner for Health Affairs of the FDA.

I am pleased to be here to present our views on H.R. 7334 and on the issues that surround the potential use of heroin as an analgesic. [See p. 129.]

In actuality the bill would not affect the availability of heroin for medical use in the United States for several reasons.

Heroin is not approved for marketing under the Federal Food, Drug, and Cosmetic Act and its investigational use is independent of its scheduling status.

Rescheduling would not modify its current availability for research purposes and, further, there is no manufacturer or commercially available pharmaceutical product.

Finally, we are also concerned that the bill focuses too narrowly on the terminal cancer patient as the only target for the proposed use of heroin.

We share the objective of the bill that there be adequate drug therapy available to patients in pain, and we are not adverse to considering the approval of heroin for this purpose should the appropriate data be submitted to us in the form of an application for marketing.

However, because of the very high attractiveness of heroin as a drug of abuse, any societal decision to permit its use should be well considered and based on a genuine medical need for the drug.

If a demonstrable need exists among a certain class of patients that is not being met by the analgesics currently on the market, then FDA would strongly encourage and support further research efforts on heroin or other drugs to meet that need.

At this point, I want to make several brief comments on the pharmacology of heroin.

Heroin is diacetylmorphine, a synthetic derivative of the natural alkaloid morphine. Heroin has a more rapid onset and a shorter duration of action than does morphine. It is more soluble in fat than morphine, and therefore enters the brain faster.

Heroin is converted in the body to morphine, the form in which it relieves pain. Heroin is an effective analgesic in man and animals and induces tolerance and physical dependence of the morphine type.

Most evidence indicates that its actions are indistinguishable from morphine and other narcotics that are listed in the table attached to my prepared statement.

Next, I would like to emphasize several points made by earlier witnesses.

There are a wide variety of powerful narcotic analgesics available commercially for treating severe pain. It is true, however, that health care professionals do not use them in a maximally effective manner at this time.

They are conservative in prescribing these drugs and tend to give them on an "as needed" basis rather than on a regular basis, which would anticipate, and thus avoid, the recurrence of pain.

Clearly, there is indeed undue concern about causing addiction in severe pain patients and, I think, a basic lack of understanding about the optimum strategy for drug prescribing to control chronic pain, which is indeed a different condition from acute pain.

Also, the hospice movement has become a potent force for reexamination of all aspects of care for the terminally ill. This certainly is a very salutary movement. It has focused attention on drugs that are currently available and on their optimal use.

Heroin has been singled out by some in this movement because of its previous extensive use in British hospices, models for the American counterparts.

Consequently, for some, heroin has become symbolic of the caring quality identified with hospices even though other potent analgesics are currently used effectively in hospice settings both in this country and in Canada and Great Britain.

Because of national concern about intractable pain and the humane care of dying patients, as well as concern by the Public

Health Service that perhaps its own controls were inhibiting research on Schedule I substances such as marihuana and heroin, the Interagency Committee on New Therapies for Pain and Discomfort was established by the Surgeon General in July of 1977.

This group has been alluded to in earlier testimony. One major charge to this group was to stimulate and facilitate therapeutic research with Schedule I drugs. The Committee has successfully guided the development of THC (tetrahydrocannabinol) and research on heroin has been fostered both intramurally and extramurally through grants and contracts.

You have heard about some of those specific studies earlier today.

Such research is necessary to determine the relative potency and possible superiority of heroin to other analgesics and to find better formulations of currently marketed drugs.

The two federally funded clinical studies on heroin for analgesia monitored by this interagency group are described in full in my prepared statement. These studies, on patients with post-surgical pain and chronic pain due to cancer, are being conducted at Sloan-Kettering and Georgetown. In many cases the data are only preliminary. The relative potency studies demonstrate that parenteral heroin is about twice as potent on a milligram for milligram basis as morphine, while providing the same general extent of pain relief.

Heroin has a more rapid onset and a shorter duration of action, but no unique attributes or advantages over morphine have been demonstrated to date.

Again, these are preliminary findings.

I would like to mention several other specific research and treatment issues. Earlier testimony alluded to Dr. Twycross of Great Britain. He and others believe that for terminally ill patients who are wasted, and highly tolerant to narcotic drugs and unable to take medication orally, heroin is the drug of choice.

This is certainly a genuine concern. The size of this patient group is not really easy to delimit precisely but is not felt to be a large percentage of seriously ill cancer patients.

This point needs further exploration, however.

Other commercially marketed analgesics such as hydromorphone, oxymorphone, and others listed in the appendix attached to my prepared statement are as potent or more potent than heroin and are available or could possibly be formulated in more concentrated solutions.

Based on available data, we cannot conclude that heroin would be uniquely valuable with respect to its solubility characteristics at this time.

There is a good deal of research activity in the analgesic field. Some of the investigational drugs are more potent than morphine and have a longer duration of action and may offer greater safety.

NCI is carefully monitoring the current studies of heroin. Should the current research indicate a significant therapeutic benefit, efforts would be made to find a commercial sponsor for the drug.

At present heroin can be considered a drug of little commercial interest from a marketing perspective. We do not know whether this lack of marketing interest would continue in the future, how-

ever, if heroin offered clear benefits relative to other analgesics marketed in the United States.

The most difficult question concerning heroin is the safety issue in view of its known attractiveness as a drug of abuse.

Whether the availability of heroin would pose enforcement difficulties for DEA is a matter for that agency to comment on. If an approval of the drug for medical purposes carried a serious threat of increasing our national problem of heroin abuse, however, we at FDA would face a difficult decision as well.

No one has the information at this time to know how that decision might come out. I simply cite it as a real issue to be addressed in the future as part of any approval decision, or rescheduling decision, on heroin.

We believe that should heroin be approved for marketing for analgesia in severe pain, it should be made available to any patient suffering from severe pain, rather than only to terminally ill cancer patients as the bill provides. We do not believe that such a restriction would be reasonable or medically sound, because current knowledge and investigational studies indicate that heroin is an effective analgesic for severe acute pain as well as chronic pain of various etiologies, for example, cancer and post-operative pain.

Research on a new drug is conducted under an investigational new drug application, an IND. This is now occurring with heroin. Ordinarily these human clinical investigations proceed in three sequential phases. In phase I, clinical studies are performed in a small number of patients or in healthy subjects to obtain some basic information on human response and tolerance and, if possible, efficacy.

In phase II, a larger group of patients is studied to obtain more definitive information on efficacy and side effects.

Current heroin studies are presently within this phase. If the results of the first two phases warrant it, larger trials may be conducted in phase III to develop information for precautions, warnings, and contraindications and directions for use and labeling.

At the conclusion of these three phases of investigation, the drug sponsor then compiles the clinical data, together with toxicological data and plans, and submits all of these for review in a new drug application, or NDA, to FDA.

Before approval is granted, FDA must assure itself that the data show that the drug is effective and that it can be used safely under the terms of its proposed labeling.

FDA considers the term "safe" to mean that the health benefits of the drug entity clearly outweigh the risks presented by the drug. This decision is made by FDA on the basis of careful, scientific review of the application, by our scientific staff, often assisted by open discussions before an advisory committee of experts.

When an NDA is considered to be approvable, the sponsor and FDA staff must agree on the final labeling—known as the "package insert"—which contains a statement of the precise conditions under which the drug may be used: warnings, precautions, side effects, and other matters.

Only then is the NDA approved and marketing can commence.

In the case of heroin, it is clear that it is an effective analgesic, but much of the information needed for a full new drug application is currently lacking.

For example, controlled studies to define carefully its analgesic potency are just now being done at Georgetown and Sloan-Kettering.

Whether or not there is sufficient clinical information for a sponsor to write a complete package insert is not clear. These are not insurmountable obstacles; indeed, these are standard requirements that every drug manufacturer meets before a new product is marketed. Most importantly, there is no manufacturer at present who has developed a pharmaceutical preparation suitable for marketing or shown an interest in doing so.

Finally, I would point out if heroin were to become a marketed drug, it would also first have to be rescheduled from its current schedule I status to schedule II under the Controlled Substances Act.

This could be accomplished administratively when it is clear that a pharmaceutical firm is about to obtain an approved NDA when FDA and DEA ordinarily consider rescheduling actions.

In conclusion, the renewal of interest in medical uses of heroin in the United States is relatively recent. Although heroin is an effective analgesic, it is not yet at the point of being a fully studied drug suitable for marketing as a pharmaceutical preparation. That is to say, it may not meet the standards for adequate and well-controlled trials to demonstrate substantial evidence of safety and efficacy required by the law.

While no drug firm has expressed interest to FDA in marketing heroin for medical uses for any condition, and we do not believe there is any unmet medical need that would be served uniquely by heroin at this time, the Government will continue to gather information needed to determine the potential role of heroin as an analgesic in relationship to currently available and emerging drugs.

There is no need at this time to reschedule heroin from schedule I to schedule II of the Controlled Substances Act. This would not make heroin more available as a therapeutic or investigational agent. Should heroin be found approvable for marketing by FDA, after submission of an NDA by a drug firm, FDA would request that DEA reschedule it from schedule I to the appropriate schedule.

Finally, I believe that the debate over heroin should not distract us from the important goal of improving the care of seriously ill patients with severe chronic pain, regardless of its etiology. While drug therapy plays an important role in this, it is not overriding. Surgery, rehabilitation medicine, psychologic, emotional and social counseling and provisions for humane care, are all important factors in dealing with this problem.

Physician and public education are urgently needed in these areas. These needs must not be overshadowed by a narrow focus on heroin.

This concludes my statement. I will be happy to answer any questions.

[Testimony resumes on p. 143.]

[Dr. Nightingale's prepared statement and attachment follows:]

STATEMENT

BY

STUART L. NIGHTINGALE, M.D.

ACTING ASSOCIATE COMMISSIONER
FOR HEALTH AFFAIRS

FOOD AND DRUG ADMINISTRATION

Mr. Chairman:

I am Dr. Stuart L. Nightingale, Acting Associate Commissioner for Health Affairs of the Food and Drug Administration (FDA). I am pleased to be here to present our views on H.R. 7334 and on the issues that surround the potential use of heroin as an analgesic.

H.R. 7334 would remove heroin from Schedule I of the Controlled Substances Act and place it in Schedule II, and, would limit the administration of heroin to terminally ill cancer patients who are inpatients in hospitals or hospices. We do not favor enactment of this bill.

In actuality, the bill would not affect the availability of heroin for medical use in the United States for several reasons. Heroin is not approved for marketing under the Federal Food, Drug, and Cosmetic Act and its investigational use is independent of its scheduling status. Rescheduling would not modify its current availability for research purposes. Not only is there no manufacturer or commercially available pharmaceutical product, but importation of crude opium for domestic manufacture of heroin is illegal. Finally, we are also concerned that the bill focuses too narrowly on the terminal cancer patient as the only target for the proposal.

We share the objective of the bill that there be adequate drug therapy available to patients in pain, and we are not adverse to considering the approval of heroin for this purpose should the appropriate data be submitted to us in the form of an application for marketing. However, because of the very high attractiveness of heroin as a drug of abuse, any societal decision to permit its use should be well considered and based on a genuine medical need for the drug. If a demonstrable

need exists among a certain class of patients that is not being met by the analgesics currently on the market, then FDA would strongly encourage and support further research efforts on heroin or other drugs to meet that need. Furthermore, if scientific evidence should then warrant the marketing of heroin as an analgesic, then we believe that existing statutory mechanisms could accommodate its use in appropriate circumstances.

PHARMACOLOGY OF HEROIN

Heroin is diacetylmorphine, a synthetic derivative of the natural alkaloid morphine. Heroin has a more rapid onset and a shorter duration of action than does morphine. It is more soluble in fat than morphine, and therefore enters the brain faster. Heroin is converted to morphine--the form in which it relieves pain. Heroin is an effective analgesic in man and animals and induces tolerance and physical dependence of the morphine type. It is also a respiratory and cough depressant and produces constipation. In excessive doses, heroin causes death by respiratory depression. Most evidence indicates that its actions are indistinguishable from morphine.

There are data and summaries comparing the analgesic potency of morphine and heroin parenterally to other potent commercially available analgesics, both on a milligram per milligram basis and relative to standard equianalgesic doses. A table compiling some of this information is attached as an appendix. It should be noted, however, that most analgesics for severe chronic pain in hospital and hospice settings are administered orally.

FEDERAL GOVERNMENT INVOLVEMENT IN RESEARCH ON HEROIN FOR ANALGESIA

While a wide variety of powerful narcotic analgesics are available to individuals with severe pain, it has been recognized for a number of years that many health care professionals do not use them in a maximally effective manner. In particular, most physicians and nurses have been trained to be extremely conservative in the use of narcotic analgesics for patients with severe chronic pain and have tended to give these drugs only on an "as needed" basis rather than on a regular basis to anticipate, and thus avoid, the recurrence of pain. Specialists in the pain field believe that inappropriate prescribing stems from undue concern about causing addiction and, perhaps more importantly, from a lack of understanding of the optimum pharmacotherapeutic strategy for controlling pain.

Recently, the hospice movement has become a potent force for reexamination of all aspects of care for the terminally ill, including the drugs currently available and their optimal use. Heroin has been singled out by some in this movement, because of its previous extensive use in British hospices, role models for the American counterparts. Consequently, for some, heroin has become symbolic of the caring quality identified with hospices even though other potent analgesics are currently used effectively in hospice settings in the United States, Canada, and even in Great Britain.

Because of national concern about intractable pain and the humane care of dying patients, as well as a concern on the part of the Public Health Service that its own controls on marijuana and heroin may have been inhibiting research, in 1977 the Assistant Secretary for Health

established an interagency group--the Interagency Committee on New Therapies for Pain and Discomfort. One major charge to this group was to stimulate and facilitate therapeutic research with Schedule I drugs. The Committee is co-chaired by Dr. Seymour Perry, now Director of the National Center for Health Care Technology, and Dr. Diane Fink of the National Cancer Institute, and includes among others, representatives of the Food and Drug Administration; the Alcohol, Drug Abuse, and Mental Health Administration; the National Institutes of Health; the Drug Enforcement Administration; and the White House. The Committee has successfully guided the development of THC (tetrahydrocannabinol--a constituent of marijuana) to a stage where its greater availability for evaluation in the treatment of nausea and vomiting in cancer patients is imminent. Research on heroin has been fostered intramurally, and extramurally through grants and contracts. Such research is necessary to determine the relative potency and possible superiority of heroin to other analgesics and to find better formulations of currently marketed drugs.

CURRENT AND RESEARCH: STUDIES OF HEROIN FOR ANALGESIA

The analgesic properties of heroin hydrochloride are being investigated at the Sloan-Kettering Institute and Georgetown University Medical Center under funding from the Federal Government. The Georgetown study conducted by Dr. William Beaver is still in progress, whereas some portions of the comprehensive Sloan-Kettering study conducted by Dr. Raymond Houde have been completed.

In 124 cancer patients with post-operative pain at Sloan-Kettering, intramuscularly administered heroin hydrochloride and morphine sulfate were studied to determine equianalgesic doses. It was found that to produce the same degree of pain relief required one-half as many milligrams of heroin as of morphine, but that heroin had no unique attributes. While heroin had a more rapid onset of action than morphine, it also had a shorter duration of action.

In a second study conducted at Sloan-Kettering, heroin was compared to morphine in patients with chronic pain due to advanced cancer. Preliminary results on 36 patients indicate that heroin was again about twice as potent as morphine, but had the same maximum effect. The same pharmacodynamic properties were also observed in the chronic pain group; i.e., heroin had a more rapid onset and shorter duration of action than morphine. In general, the patients with chronic pain had significantly less pain relief than those with acute pain at equianalgesic doses of both heroin and morphine. Mood improvement was noted to be about the same in both heroin and morphine-treated patients, but was again less than in the post-operative pain patients. The study did not reveal any advantages of heroin over morphine in the patient population with chronic pain.

Another study being conducted in chronic pain patients at Sloan-Kettering is intended to determine the relative potency of oral as compared to intramuscular administration of heroin. Twenty-two patients have begun the protocol and ten have completed the study. Preliminary results suggest that 65 milligrams of oral heroin is equivalent to 10 milligrams of intramuscular heroin in terms of total pain relief.

However, greater peak analgesic relief was afforded by intramuscular heroin. The results suggest an oral/parenteral potency ratio for heroin, similar to that for morphine.

Although the study has not been completed, the results to date suggest that the orally administered heroin would have no special advantages to currently available oral narcotic dosage formulations.

The Georgetown study of the relative analgesic potency of intramuscular heroin and morphine in patients with chronic pain due to advanced cancer is still in progress. The study to date has shown that heroin gives the same maximum analgesic effect as morphine but milligram per milligram is 2.4 times as potent as morphine. Heroin also appears to have more rapid onset and a shorter duration of action. So far, the results of the Georgetown study are in general agreement with those of the Sloan-Kettering group.

OTHER RESEARCH AND TREATMENT ISSUES

Dr. Twycross of Great Britain and others believe that for terminally ill patients who are wasted, highly tolerant to narcotics and unable to take medication orally, heroin has the advantage of greater solubility than morphine. It can, therefore, be administered in smaller volumes that are less painful, particularly advantageous when analgesics are given in the very high dosages that are sometimes required in patients who have developed a high tolerance to narcotics. This point needs further exploration. There are other commercially marketed analgesics such as hydromorphone, oxymorphone and others listed in the appendix that are as potent or more potent than heroin which are already available or could

possibly be formulated in more concentrated solutions. Based on available data, we cannot conclude that heroin would be uniquely valuable with respect to its solubility characteristics.

I would note also that there is another analgesic in the late stages of development that shows great promise for use in severe pain in chronically ill patients. This drug, known as buprenorphine, is a potent analgesic which is 10 to 20 times as potent as morphine and has a duration of action from a single dose of approximately 24 to 48 hours. Still other analgesics, in various investigational stages, may offer additional promise in pain control.

Over the past several years, the Interagency Committee on New Therapies for Pain and Discomfort has had experts in hospice care and clinical investigations in the pharmacotherapy of pain address its sessions and has sponsored a national conference on pain. The message delivered repeatedly to our group by these specialists is that heroin is not necessary for the treatment of the vast majority of patients who have severe pain. The latter can be appropriately handled in the hospice or hospital setting with adequate doses of oral liquid formulations of morphine or methadone, or other drugs, and, when oral medications cannot be tolerated, with commercially available potent injectable analgesics. The major problem in pain management, as seen by these experts, is not the availability of suitable drugs, but that, as mentioned earlier, they are often used in doses that are too low or not frequent enough.

FUTURE OF HEROIN RESEARCH AND MARKETING CONSIDERATIONS

The National Cancer Institute (NCI) is carefully monitoring the current studies of heroin. Should the current research indicate a significant therapeutic benefit, efforts would be made to find a commercial sponsor for the drug. At present, heroin can be considered an orphan drug since it is a drug of little commercial interest from a marketing perspective. It is unknown whether this lack of marketing interest would continue in the future, however, if it offered clear benefits relative to other analgesics marketed in the United States.

The most difficult question concerning heroin is the safety issue in view of its known attractiveness as a drug of abuse. Whether the availability of heroin as a marketed drug would pose enforcement difficulties for the Drug Enforcement Administration (DEA) is a matter for that agency to comment on. If an approval of the drug for medical purposes carried a serious threat of increasing our national problem of heroin abuse, however, then we would face a difficult decision. No one has the information at this time to know how that decision might come out. I simply cite it as a real issue to be addressed in the future as part of any approval decision, or rescheduling decision, on heroin.

We believe that should heroin be approved for marketing for analgesia in severe pain, it should be made available to any patient suffering from severe pain, rather than only to terminal cancer patients as the bill stipulates. We do not believe that such a restriction would be reasonable or medically sound because current knowledge and investigational studies

indicate that heroin is an effective analgesic for severe acute pain as well as chronic pain of various etiologies (e.g., cancer, post-operative). Furthermore, to define "terminal illness" is very difficult and any definition will be imprecise. Indeed, we have heard from hospice medical directors that some people confined to hospices not only were not terminally ill, but did not even have cancer or some other so-called terminal illness. This and other experiences in other areas reinforces our concern with any attempt to define terminal illness administratively or legally.

MARKETING APPROVAL PROCESS

One of the questions raised about heroin focuses upon what legal and regulatory requirements would have to be met to secure approval for general distribution and use.

Research on a new drug is conducted under an investigational new drug application (IND), and this is now occurring with heroin. Ordinarily, these human clinical investigations proceed in three sequential phases. In Phase I, clinical studies are performed in a small number of patients or in healthy subjects to obtain some basic information on human response and tolerance, and, if possible, to determine, preliminarily, human efficacy.

In Phase II, a larger group of carefully selected patients are studied to obtain more definitive information on efficacy and side effects. Current heroin studies are presently within this phase. And if the results of the first two phases so indicate, a larger

number of trials may be conducted in Phase III, some under less controlled conditions, to develop information for precautions, warnings and contraindications, and directions for use in the labeling.

At the conclusion of these three phases of investigation, the drug sponsor then compiles the clinical data, together with toxicological data from animal studies and manufacturing information and plans, and submits all of these for review in a new drug application (NDA) to the FDA. Before approval is granted, FDA must assure itself that the data show that the drug is effective and that it can be used safely under the terms of its proposed labeling.

FDA considers the term "safe" to mean that the health benefits of the drug entity clearly outweigh the risks presented by the drug. This decision is made by FDA on the basis of a careful review of the application by our scientific staff, and often, on the basis of open discussions before an advisory committee of experts, as well, and then on the basis of a final review by FDA officials.

When an NDA is considered to be approvable (i.e., there are no deficiencies in the application), the sponsor and FDA staff discuss final printed labeling (known as the "package insert" or professional labeling) which will contain the precise conditions under which the drug may be used: warnings, precautions, side effects and other matters. After the sponsor and FDA are in agreement, the NDA is approved and marketing may commence.

In the case of heroin, it is clear that the drug is an effective narcotic analgesic, but much of the information needed for a full new drug application is currently lacking. For example, controlled studies to define carefully its analgesic potency are just now being done. Whether there is sufficient clinical information for a sponsor to write a complete package insert is not clear. These are not insurmountable obstacles; indeed, these are standard requirements that every drug manufacturer meets before a new product is marketed. Most importantly, there is no manufacturer at present who has developed a pharmaceutical preparation suitable for marketing or shown an interest in doing so.

Finally, I would point that if heroin were to become a marketed drug, it would also first have to be rescheduled from its current Schedule I to Schedule II under the Controlled Substances Act. This could be accomplished administratively by the Department of Health and Human Services and the Drug Enforcement Administration without new legislation if the scientific and enforcement considerations warrant it. The proper time to consider such action, from our perspective, is when it is clear that a pharmaceutical firm is about to obtain an approved NDA. This is when the FDA and DEA ordinarily consider the rescheduling of newly marketed products.

CONCLUSION

The renewal of interest in medical uses of heroin in the United States is relatively recent. Although heroin is an effective analgesic, it is not yet at the point of being a fully studied drug suitable for marketing as a pharmaceutical preparation. While no drug firm has expressed interest to the FDA in marketing heroin for medical uses for any condition, and we do not believe that there is any unmet medical need that would be served uniquely

by heroin at this time, the Government will continue to gather information needed to determine the potential role of heroin as an analgesic in relationship to currently available and emerging drugs.

There is no need, at this time, to reschedule heroin from Schedule I to Schedule II of the Controlled Substances Act. This would not make heroin more available as a therapeutic or investigational agent. Should heroin be found approvable for marketing by FDA, after submission of an NDA by a drug firm, FDA would request that DEA reschedule it from Schedule I to the appropriate schedule.

Mr. Chairman, in closing, I believe that the debate over heroin should not distract us from the important goal of improving the care of seriously ill patients with severe chronic pain, regardless of its etiology. While drug therapy plays an important role in this, it is not over-riding. Surgery, rehabilitation, medicine, psychologic, emotional, and social counseling, and provisions for humane care, are all important factors in dealing with this problem. Indeed, physician and public education are urgently needed in these areas. These needs must not be overshadowed by a narrow focus on heroin.

This concludes my formal statement. I will be happy to answer any questions you or the Subcommittee members may have.

Drug	Mg Equianalgesic to 10 mg Morphine	Duration of Action (hrs)	Maximum Water Solubility (mg/ml)	Marketed Concentration (mg/ml) Usual Dose Volume = 1 ml
Fentanyl Citrate (Sublimaze)	.05-0.10	1-2	25	.05
Hydromorphone HCl (Dilaudid)	1-1.5	4-5	333	1, 2, 3, 4
Oxycodone HCl (Numorphan)	1.5	4-5	250	1.5
Butorphanol (Stadol)	1-2	3-4	unavailable	1-2
Levorphanol Tartrate (Levo-Dromoran)	2-4	4-5	22.2	2
Heroin HCl ^a	3.3 to 5	3-4	500	8
Methadone HCl (Dolophine)	7.5-10	3-5	120	10
Morphine sulfate ^a	10	4-5	64.5	8-20
Nalbuphine HCl (Nubain)	10	3-4	30	10
Opium Alkaloids HCl (Pantopon)	10	3-4	unavailable	20
Alphaprodine HCl (Nisentil)	40-60	1-2	1000	40-60
Codeine sulfate	60-120	4-6	33.3	15, 30, 60
Nepiridine HCl (Demerol)	100	2-4	unavailable	50-100

* see footnotes page 2

a) Material contained in this table was obtained from the following sources:

- 1) Remington's Pharmaceutical Sciences, eds. Osol, A. and Hoover, J.E., Mack Publishing Co., Easton, Pa., 1975
 - 2) The Merck Index, 9th edition, eds. Windholz, M., Budavari, S., Strumstos, L.Y. and Fertig, M.N., Merck & Co., Inc., Rahway, N.J., 1975
 - 3) The Pharmacological Basis of Therapeutics, eds. Goodman, L.S. and Gilman, A., McMillan Publishing Co., Inc., New York, 1975
- b) Buprenorphine HCl is not currently marketed in the United States. It is administered orally and the lipid solubility of the drug is 40 times that of its water solubility.
- c) Heroin HCl is not currently marketed in the United States. The 8 mg/ml concentration was the highest concentration used in the heroin analgesic studies at the Sloan-Kettering and Georgetown medical centers. A parenteral heroin dosage form could be formulated in the concentration range of 20-50 mg/ml. Given the relative potency of heroin vs. morphine this would be equivalent to a minimum of 40 mg/ml of morphine.
- d) The National Cancer Institute has developed a very soluble morphine compound, a morphine acetate salt.

Mr. WAXMAN. Thank you for your statement.

Before we ask any questions, I would like to call on Mr. Haislip. I am going to have to apologize to both of you. Dr. Carter and I have to go to the House floor to present a bill that has come out of our subcommittee.

Congressman Walgren will continue chairing the hearing and Mr. Madigan is also here to pursue some additional questions. Thank you very much.

STATEMENT OF GENE R. HAISLIP

Mr. HAISLIP. Thank you. My name is Gene Haislip. I am here to testify with regard to H.R. 7334, a bill, the purpose of which is to reschedule heroin and to make it available for use in the terminal-ill cancer patients.

Our position with regard to this piece of legislation is that it is not desirable at this time and we do oppose it. I would like to explain the nature of our position and why we are advising as we are.

To do so, it is first desirable to talk about heroin and its present regime of control and the laws which control it and try to provide some historical perspective for that.

Heroin is a very powerful narcotic, essentially equivalent in its addicting liability and its potency to morphine. It is listed in schedule I of the Controlled Substances Act which is the schedule of drugs to which we apply the most rigid controls and which have no use in medical practice in the United States.

These drugs are permitted to be used for research purposes and that has always been the case since the passage of this law and is the case at the present time.

It does not appear that this is an unsatisfactory device for that purpose inasmuch as we have not had complaints from researchers about its availability or the procedures in a good many years.

It would appear under the law as it exists that heroin could be rescheduled administratively into another schedule if a legitimate medical use is found for it, but there are other provisions of the law which we need to be aware of that have important bearing on anything the Congress should do.

Most specifically, the present law also requires that no finished narcotics can be imported into the United States. We only permit the importation of opium for the manufacture of those narcotics. And the law specifically states that no crude opium may be imported into the United States for the purpose of manufacturing heroin.

So it is clear that the Congress in enacting the present law did not intend that heroin be manufactured in this country or that it be imported.

Now, to understand the nature of this provision and how it came into the law, it is necessary to look at the total history of this very unique drug to which Congress has determined unique standards should be applied.

The drug was introduced in 1898 with a great deal of promise because of its analgesic potency.

It was felt that it would prove to be a valuable drug in the treatment of pain. It was used for a considerable period of time for

the treatment of morphine addiction, with the hope that it could cure morphine addicts.

It was also used for many years in cough syrups as a cough suppressant. Indeed, it does have that capability as well. But for various reasons, many of which probably have nothing to do with the pharmacology of the drug, heroin quickly became the drug of choice for a large and growing addict population in the United States.

Now the figures from that period of history are sketchy at best, but according to the authorities of the time, there was a major spread, an epidemic of heroin addiction from the illicit use of heroin. It was comparable to the sudden spread of heroin addiction which we experienced in this country again in the late 1960's.

For this reason the drug lost its popularity with the medical profession in our country, and by 1920, the American Medical Association was calling for the banning of the drug in this country.

In 1924, Congress enacted the provision of law which I just cited to you which prohibited the importation of opium for the purpose of manufacturing heroin. It is clear when you read this law and when you read the legislative history of the time that the purpose of the Congress was, indeed, to support the body of medical opinion in the United States that this drug possessed no unique properties not served by other drugs just as well, but did have some unique desirability to a very large and growing narcotic addict population.

That law has been carried forward in the present law. Moreover, in 1956, the Congress was not satisfied with that move because this was still heroin which had been legitimately marketed in the stocks in various places in the country, so that in 1956 the Congress also required that all of the heroin outstanding in stocks be surrendered to the Government.

Again, reading the legislative history of that act makes it crystal clear that the Congress again intended that there be no heroin used for medical practice in the United States on the assumption that it had no unique properties not possessed by other drugs which were not connected as directly with this severe addiction problem.

Therefore, it appears that the intent of the Congress was that this special burden be met in terms of any potential use for heroin.

Now, I think that it goes without saying—well, I think it needs to be said—that the administration, DEA, and certainly myself personally, would take an entirely different view of this or some piece of legislation if indeed it were established that heroin had some unique property and would offer relief to a class of people who are suffering who can obtain no relief through the drugs that are now available or can be easily made available.

So I think that the opposition to the bill that we are expressing is based on that assumption of fact, which is in accordance with the judgment that the Congress has made these many years in several different enactments of law.

If we look at the research with which we are familiar, I think that you have heard the result of that today.

DEA has access to no additional research. We are a member also of the Inter-Agency Committee on Pain and Discomfort, so that the

body of knowledge which we are basing our opinions on is the same body of knowledge that you had described to you.

It does not appear that heroin offers any unique advantage. In fact, at least one drug, Dilaudid, seems to have a potency, milligram for milligram, which is approximately twice that of heroin.

It appears that there is a problem in the manner in which current dosage forms of some narcotics are formulated and marketed in terms of their pain effectiveness.

Much has been made of the question of the solubility of heroin because of the inability of cancer patients, in their final stages, to absorb large volume dosages, but again the evidence that we are aware of shows that the solubility is not a problem. Other drugs, which are available and which are approved, can meet this same burden if marketed in different dosage forms than at present.

Again, I am not a scientific expert and DEA has no knowledge other than the research of which you have been made aware, but this is what it says.

So it is based on that presumption of the factual situation as it exists that we have formulated our opinion.

Further, I would invite you to look at the international situation with regard to the use of heroin because I think that you can see there very clearly the trend of declining usage worldwide over a period of years.

Not many years ago, heroin was produced and consumed in the world in terms of several thousand kilograms a year. At the present time heroin is only used in any appreciable quantity by one country, and that is Great Britain. They consume approximately 70 kilograms a year.

In Belgium it appears that perhaps 1 kilogram is produced a year. This amount probably simply for research purposes.

France and the Netherlands produce almost an insignificant amount, again presumably for research purposes.

So the popularity of heroin has declined over the several years.

I would like to say further that because of its unique relationship to the illicit traffic, a relationship that is not clearly understandable in scientific terms, it is clear that the drug would pose a major problem of diversion; however, there are drugs currently marketed which also pose a major problem of diversion.

My suspicion would be—and I think that it is supported by the facts—that heroin would pose more severe problems than usual and that indeed we would be hard pressed to control its distribution with the current regulations and current resources which we possess, but still I would say that if the factual determination is made by scientists based on the facts, that heroin possesses a unique benefit that is not satisfied by other drugs to relieve some segment of suffering people, that it would then be incumbent upon us to try to find the means to control its distribution so that those benefits could be enjoyed.

I would just like to cite in closing that the original intent of the Congress I think is expressed in the current law. They did—the judgment was made not once but repeatedly that this was the special burden which should attach to the use of heroin based on the unique social experience we have had with the drug.

The judgment of the Congress was right at that time. I think it is right now, and until we find the facts lead us to a contrary position, that is the position that we should take.

That concludes my remarks.

[Testimony resumes on p. 162.]

[Mr. Haislip's prepared statement follows:]

Gene M. Raislip, Director
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Good morning, Mr. Chairman. I am pleased to be here to discuss with you H.R. 7334, a bill which proposes to place heroin under Schedule II control. It is believed that this would allow heroin to be available for the treatment of the terminally ill cancer patients.

Heroin, which is made from morphine, was first synthesized in 1874 in England. Favorable reports on the substance led to its commercial production and marketing in 1898. Heroin was soon prescribed for almost all the conditions for which codeine and morphine were used and was also considered effective in treating addiction. However, it soon became apparent that heroin itself led to addiction. Some heroin maintenance programs were developed to treat addicts, but these were discontinued because these programs produced no useful results and often lead to profiteering by unethical practitioners. As time passed, heroin addiction emerged as a major drug abuse problem in the United States and in many parts of the world.

Recently, the possible use of heroin as an analgesic has re-emerged, particularly as a means for the humane care of terminally ill patients. The Administration is committed to using proper controls and safeguards to make any drug which has medical benefits available to the people of the United States regardless of its past history of abuse.

The question of the medical use of heroin requires experts to balance the desire to relieve suffering in terminally ill patients with the need to protect the remainder of society from the illicit use of heroin resulting in addiction and social damage related to this addiction. Initially, this requires the appropriate branch of government to determine the medical usefulness of heroin. This is now being done.

Through the years, Congress has played a major role in the control of heroin and elimination of its medical use in the United States. This commitment to the strict control of heroin has been based on the perception that heroin has posed a great danger to society as well as individuals. I believe it is important to be aware of this long history of stringent Federal controls on heroin.

Legislative History

Prior to the institution of narcotic control activity in the early twentieth century, opium derivatives such as smoking opium, morphine and heroin were available in many forms. Through various legislative enactments, the medical use of heroin was eliminated. Public Law 60-221, passed in 1909, reduced the availability of heroin by limiting the importation of opium and opium derivatives to that required for legitimate medical needs. At that time, heroin could still be used medically.

The Harrison Narcotic Act of 1914 (P.L. 63-47) established a tax-based control mechanism regarding the distribution of narcotics. Further, it provided for the criminal prosecution of medical practitioners who prescribed or dispensed narcotics outside "the course of professional practice." This was an important element of the Act because it allowed the prosecution of unscrupulous practitioners who supplied narcotics such as heroin to addicts.

The Narcotic Drug Import and Export Act of 1922 (P.L. 67-227) amended the 1909 Act to include provisions limiting the exportation of opium products and, significantly, to prohibit the importation of any narcotic other than the amount of crude opium (or coca leaves) required to meet legitimate needs. In 1924, as a result of the growing awareness of the abuse of heroin and the severe social problems attendant to addiction, this Act was amended to prohibit the importation of opium for the purpose of manufacturing heroin. At this point heroin and any opium from which heroin could be manufactured could not be imported. These statutes, in addition to the absence of commercial domestic cultivation of opium, eliminated the legitimate availability of heroin, and the U.S. Congress' intent to prohibit all use of heroin was clear. This attitude was reflected in the Report of the Committee on Ways and Means

(H.R. 7079), dated April 17, 1924 which accompanied the 1924 amendment:

"Under existing law, crude opium may be imported if the board finds such importation is necessary for medical and legitimate uses. It affirmatively appears from the hearings on this bill that heroin is not necessary therefor. Abundant testimony on this point submitted at the hearings was to the effect that heroin does not serve any medicinal purpose which may not be better served by other available drugs ... (and) ... that it is highly deleterious ..."

Paralleling these Congressional activities was the growing perception within the medical community that heroin had no legitimate medical use. In 1920, the American Medical Association adopted the following resolution: "that heroin be eliminated from all medicinal preparations and that it should not be administered, prescribed, nor dispensed; and that the importation, manufacture and sale of heroin should be prohibited in the United States." Also in 1920, the monograph on heroin was removed from the United States Pharmacopeia. Between 1916 and 1924, the Public Health Service, Army, Navy and Veteran's Administration banned the use of heroin in their respective facilities.

The Narcotic Control Act of 1956 (P.L. 84-728) explicitly

"outlawed" the possession of heroin and required the surrender of all of stocks on hand acquired prior to the law's enactment. The Comprehensive Drug Abuse Prevention and Control Act of 1970 (P.L. 91-513) repealed most earlier narcotics laws and substituted its own provisions, many of which, however, were borrowed from previous enactments. Thus, for instance, the importation of opium for the manufacture of heroin has continued to be prohibited and the earlier legislative intent is thus carried forward in the present law.

International Impacts

In addition to legislative enactments, our international obligations in the area of drug control should be considered. The United States is a world leader in the area of narcotics control and has been since the turn of the century. As a Party to the 1953 Single Convention on Narcotic Drugs and its predecessor treaties, we have taken our responsibilities seriously. Thus, for instance, we have not allowed any domestic cultivation of narcotic raw materials in favor of a total reliance on their importation. In refusing to add to excessive world supplies of narcotic raw materials, the United States placed its own interest behind those of the world community. The United Nations applauded this action as a significant

instance of our "consistent solidarity with the rest of the international community." Although the treaty would allow a lesser control regime for heroin than that required by the Controlled Substances Act, in light of our traditional role as a world leader in drug control, such action should not be undertaken without clear justification. In a 1976 resolution adopted by the United Nations Commission on Narcotic Drugs, the body recommended that countries that had not already prohibited the manufacture and medical use of heroin do so, if prevailing conditions in the country allow. If we were to allow the medical use of heroin, we would have to provide the international community with our rationale for taking such action.

In reviewing the historical aspects of heroin legislation, I do not mean to imply that heroin could never or should never be used in legitimate medical practice in the United States. However, the history clearly shows Congress' commitment to the stringent control of heroin. This commitment has been based on the destructive influence that heroin has had upon our society and the fact that there has been no demonstration of a unique benefit not provided by other available drugs.

Further, the history of heroin legislation demonstrates the remarkable position this substance has attained in American

society. Heroin apparently is effective in reducing pain and may be no more physically addicting than morphine. The belief of drug users that heroin is superior to other narcotics as a drug of abuse renders it far more attractive to abusers, addicts and pushers. Outside the laboratory, and within a social context, the abuse potential of heroin remains, in fact, greater than other narcotics.

Even if the greater illicit demand for heroin is fostered solely by this perception and not by inherent physical properties which can be scientifically documented, it nevertheless remains. This fact must be borne in mind when weighing the advantages and disadvantages of changing controls over heroin. It should remind us that lessening of controls on heroin should be effected only upon a finding of a strong medical justification, and then only to the extent necessary to meet that medical application.

Difference Between Schedules

Regardless of whether a narcotic drug is in Schedule I or II, if the drug has not been determined to have a legitimate, defined medical use, its use must be restricted to research. In these situations, the distinction between the schedules lies in the registration process. In order to conduct research with Schedule I drugs, a separate registration is required.

It is granted by DEA based upon a research protocol, which details the nature and extent of the research project, and prior approval by FDA. Distribution is restricted and is closely monitored by this registration mechanism.

As I stated on May 20, 1990 in my testimony before the House Select Committee on Narcotics Abuse and Control on the subject of the Therapeutic Uses of Marihuana and Schedule I Drugs, DEA fully supports all bona fide research into new treatments for pain and illness. In this connection, DEA has worked closely with all the Federal and state agencies involved in this type of research, and has been represented on the Interagency Committee on New Therapies for Pain and Discomfort since its inception.

Research with a Schedule II substance, regardless of its market or medical status, may be done as a coincident activity of a practitioner registration. There are no special DEA requirements for research on a Schedule II substance. Thus, under the Controlled Substances Act, any one of the approximately 600,000 Schedule II registrants could order, acquire, and dispense the substance for research purposes without a protocol. However, FDA advises that research on non-approved drugs must still be conducted in conformance with the requirements of Food and Drug laws.

The placement of heroin in Schedule I is based on its lack of an accepted medical use and the intent of Congress that it not be available outside the realm of research. Under the Controlled Substances Act (CSA), a drug cannot administratively be placed in Schedules II, III, IV or V without a determination that it has a legitimate medical use. As embodied in the CSA, Congress clearly established that the Secretary of HEW (now HHS) has the authority to make a scientific and medical evaluation to determine the appropriateness of a drug's medical use. As has been stated by other representatives here today, the Federal government is encouraging research into this area. The current system protects the patient, the physician, and society in general; these safeguards are important. The Administration recommends that the Congress should not take any action on heroin unless HHS first makes a positive finding of legitimate medical use.

Status of Heroin Research

At recent hearings before the Select Committee (May 20, 1980) the Chairperson of the Interagency Committee on New Therapies for Pain and Discomfort reported on a recent committee review of heroin. She stated that the Committee heard testimony from leading medical researchers from the United States, England, and Canada on the use of heroin in the treatment of dying

patients, particularly cancer patients. According to these experts: 1) pain in dying patients can be successfully managed by available medications, particularly morphine; 2) there is a need in the United States for educating all health professionals as to the proper dosages of and scheduling of available narcotics such as morphine; and 3) research studies have not confirmed a superiority of heroin over morphine in the management of moderate to severe pain.

Two studies on humans are being conducted to determine the therapeutic use of heroin in medicine; one is at the Memorial Sloan-Kettering Institute in New York, and the other at Georgetown University. The Sloane study, conducted under a grant from NIDA, is researching the opiate analgesics (including heroin). Its findings to date indicate that heroin offers no unique advantage over morphine. The Sloane study on the use of heroin was spurred by the British use of it in the treatment of pain due to cancer. Recent reports have shown a decline in the British use of orally administered heroin. This decline has been a result, in part, of finding that heroin's analgesic effect was not superior to other drugs when administered orally.

Some have expressed the opinion that a major advantage of heroin is its greater solubility. This solubility allows large doses of

analgesic to be administered in small volumes of solution. For those cases where injectable analgesics are required, a small volume for injection is certainly desirable.

Currently, all the narcotic analgesics are marketed in discrete dosage units: tablets, capsules, or milliliters of solution that contain a specific quantity of active ingredient. The amount of active ingredient that can be easily administered at any one time is limited by the concentration or form of the marketed drug. The most concentrated preparation of morphine sulfate commercially available is 15 mg/ml. However, the actual solubility of morphine is approximately four times greater. Injectable forms of Dilaudid (hydromorphone HCl), a narcotic analgesic which is made from morphine, as is heroin, are marketed in a solution which contains 4 mg/ml. This analgesic, which is approximately twice as potent as heroin, is soluble to more than 300 mg/ml.

Morphine acetate, a salt of morphine not currently marketed in this country, is soluble to more than 400 mg/ml. Morphine acetate is approximately seven times as soluble as the sulfate form, and nearly as soluble as heroin HCl. Therefore, new, more concentrated formulations of currently marketed analgesics

could easily overcome the theoretical advantage of heroin.

The solubility limitation extends to all of the drugs currently marketed. More concentrated dosage forms, if needed, could be made for all of these drugs. Therefore, it might be more prudent to see to the development of concentrated forms of already approved narcotic analgesics. These more concentrated formulations of approved analgesics, such as morphine and hydromorphone, could easily negate the perceived solubility advantage of heroin.

If, in fact, pain associated with terminal illness is not being adequately handled, I believe that an examination of the facts will show that the answer does not reside simply in the availability of heroin or any other chemical, but rather, in an increased awareness and attention to the overall psychological and physical needs of the patient--an increased emphasis on the "caring" aspects of medicine. The authorities seem to be saying that the tools to provide humane care exist in this country today; it is a matter of their proper application. A Subcommittee of the Interagency Committee on New Therapies for Pain and Discomfort is taking action to foster this approach to the treatment of pain. This position to use existing health care tools, was adopted by the American Medical Association in

1978 when they opposed the placement of heroin in Schedule II.

DEA's review of the available literature and our discussions with many of the experts in this field indicate that morphine is at least as effective as heroin. For the small percentage of patients who require administration by injection, there appears to be a need to review the proper dosages of currently available analgesics and to educate health professionals in their use. As the National Cancer Institute has indicated, we are moving in that direction. Perhaps preparations of increased strengths present part of the answer. These factors would seem to argue against the need for immediate drastic steps to move heroin from its current status.

The Likelihood of Diversion

Another area of grave concern to DEA is the diversion of medicinal heroin into illicit channels. Within the United States there is a well-defined "closed" distribution system with numerous safeguards against diversion. Despite having one of the world's most sophisticated systems of control, in 1979 over 12 million dosage units of narcotics were reported as stolen. An even larger amount was diverted by fraud, improper prescribing and outright criminal diversion by registrants.

Allowing the distribution of heroin will, without question, result in some diversion. It could lead to a dangerous situation similar to that encountered with methadone in 1973 and 1974, when that Schedule II drug had not yet been approved for addiction treatment. As a Schedule II substance, purported research uses could not be effectively controlled. To eliminate diversion would require such extreme measures (such as requiring practitioners to store heroin in vaults, transport by armored car, etc.) that its use would be discouraged. A decision as to the acceptable level of diversion would determine the level of controls.

The concern about diversion is not limited to DEA. The idea of widespread distribution of heroin to unprotected hospices suggests a potential threat to the safety of its employees. We know this concern is shared by many health professionals who see increasing incidences of armed robbery of pharmacies and other drug handlers. Last year there were 1,824 armed robberies and 4,518 night break-ins of pharmacies.

Few situations arouse the profound compassion engendered by the plight of the terminal cancer patient. The impulse to do something, anything, to relieve suffering is compelling.

While all of us share this emotion, it falls to those charged with a public responsibility not to allow emotion to rule over reasoned judgment. This is the reason that the White House urged the establishment of an interagency group which would ensure that medications are made available to those suffering from various illnesses as appropriate. If it is demonstrated that heroin is needed for the effective treatment of the terminally ill, the Administration will support making it available and will ensure that there are adequate controls over its distribution.

I would not, at this time, preclude the medical use of heroin sometime in the future. Research is underway which will give us a better understanding of this issue. DEA and the other agencies involved have made every attempt to facilitate research. As demonstrated in the recent Select Committee hearings, the fact that a drug is in Schedule I need not restrict this research.

Mechanisms currently exist whereby both scientific and clinical research can be conducted with these substances by individual practitioners or in other research projects. The Executive agencies involved encourage anyone interested in working in this area to obtain the necessary information and proceed with research projects.

I have attempted to outline opposing considerations Congress must balance in deciding this issue. I believe the potential value of heroin as an analgesic must be closely balanced with important social considerations including America's long-standing commitment to prevent drug abuse, the known ramifications of such abuse, the likelihood of diversion, and our position as a world leader in this area. This imbalance should argue against the Congressional action being currently proposed.

Mr. WALGREN [presiding]. Thank you, Mr. Haislip.

Mr. Madigan?

Mr. MADIGAN. Thank you, Mr. Chairman.

Dr. Nightingale, you indicated in your testimony that no drug company expressed any interest to the FDA in marketing heroin. No one approached the FDA expressing an interest in marketing heroin in the United States.

Considering the fact that it is illegal to market this drug, is that so unusual?

Dr. NIGHTINGALE. Well, no. Actually I merely described the present status.

I would say that given what we know about heroin, the fact it is so widely abused, we would not be surprised at this time that that is the case.

There could be a variety of reasons why we have not been approached by a sponsor. It would be because there is no evidence of superiority or great therapeutic potential of heroin relative to other potent drugs to date.

Mr. MADIGAN. So long as it is classified as it is presently classified, wouldn't it be very unusual for a drug company to come to you and say, "We would like to manufacture this drug," which it would be illegal to distribute?

Dr. NIGHTINGALE. No; I think we have had drug companies come to us, as sponsors of schedule I drugs in the past. And since we have been receptive to heroin IND applications, one would suppose that this alone would have stimulated or encouraged inquiries from potential sponsors about marketing.

Clearly, heroin seems to be in a different league in a sense, because of the societal attitudes toward it. However, schedule I per se would not be the inhibiting factor. It is common knowledge, I believe, in the drug industry that a drug cannot be marketed while in schedule I. At the time of marketing, such a drug must be removed from schedule I and placed under some other schedule under the Controlled Substances Act or decontrolled.

Mr. MADIGAN. Exactly the point that you are trying to make in all of that is something that unfortunately escapes me because it seems to me that if it is being marketed any place by any drug company that is manufacturing it, the lack of a domestic drug company to manufacture heroin seems to be a problem.

I have traveled in other countries and have been able to buy drugs manufactured by U.S. companies abroad; even such things as

Ben-Gay can be purchased—although I know it isn't a drug—on the shelf in drug stores in Paris under a somewhat different spelling.

The same thing is true of laxatives manufactured by the Ciba-Geigy Co. They can be bought in almost any country in the world today. Why do we need a domestic manufacturer of heroin to come forth?

Dr. NIGHTINGALE. Well, in terms of the requirements of the Federal Food, Drug, and Cosmetic Act, you would have to have a sponsor in this country who would serve as the manufacturer.

I cannot impute specific motivations to those who have not come forward as sponsors at this point in time. We just do not know.

But one can speculate on a variety of reasons. Certainly, one could be the patent issue. Thus, even if heroin showed some therapeutic promise, then it might be considered an orphan drug on the basis of patentability.

Mr. MADIGAN. Can the Government itself be the sponsor?

Dr. NIGHTINGALE. Certainly it is a possibility.

The Government usually does not serve as the sponsor. The National Cancer Institute may be the sponsor during the drug development (IND) phase, but NCI usually finds a commercial sponsor who submits the NDA. After approval, the commercial sponsor brings the drug on the market.

Mr. MADIGAN. Could your agency be a sponsor?

Dr. NIGHTINGALE. We could not. We are a regulatory agency. We are not involved in drug development. It would be a conflict of interest for us to do that.

Furthermore, perhaps too much is being made of what I said earlier about not being any commercial interest now.

While there has been no interest expressed, we have not canvassed the industry. I do not believe NCI has either. Even where NCI has made a real effort to find a commercial sponsor, as with THC, a drug with true therapeutic potential, it is quite difficult to find a sponsor.

We really do not know precisely why but the fact that there is not a commercial sponsor involved now can be taken as some evidence that there is not a lot of interest in heroin at this point in time.

Certainly, that could change depending on the outcome of the research studies.

Mr. MADIGAN. I understand while I was gone earlier that some of the other witnesses discussed this group C designation. I wonder if you think that would be an appropriate procedure to follow, as the requisites of safety, lack of commercial interest, and a defined target population are all satisfied?

Dr. NIGHTINGALE. Well, the primary issue in terms of utilization of Group C is that it is usually utilized for a drug on its way to marketing. It has demonstrated therapeutic advantage over some other drug currently on the market.

It is really a distribution system for a drug that has gone further than phase 2 studies, and that is awaiting marketing, but may need further studies to better define efficacy or some safety issues.

Of course it is not the same as marketing. It would not be an ideal holding action locus for a drug for which no commercial sponsor could be found.

In short, it is really a specialized category developed by NCI and agreed to by FDA for drugs on their way to marketing. It is for drugs much further along in the approval process than is heroin at this time.

Mr. MADIGAN. We have been talking this morning about a relatively small group of people who are terminally ill with cancer, and about making heroin available to those people because it is more soluble, because it can be injected in smaller doses, and thus allows the person receiving the injection to retain a greater degree of coherence.

We have heard some very impressive people from the medical profession say that heroin has those properties and that no other analgesic does to the same degree. Some of those people are past presidents of medical societies.

Are you prepared to ignore all of that and to say that they don't know what they are talking about?

Dr. NIGHTINGALE. No. The studies that are being done now are evaluating the relative potencies of heroin and morphine and other issues such as side effects.

What we see to date from those Government-sponsored studies, carried out by experts such as Dr. Beaver, is that there is essentially no major difference between them. That might change, particularly as some of the preliminary results are extended and other protocols are undertaken. But at this point in time I believe that the weight of medical evidence would result in experts in the pain field agreeing that heroin is quite similar pharmacologically to morphine and other narcotic analgesics.

There may be a difference in potency on a milligram per milligram basis, but apparently not a great difference between heroin and a host of other narcotic drugs in terms of potency per dose. That is reflected in the table appended to my prepared statement.

On returning to what you were saying earlier, it may be that heroin would prove to offer an advance in terms of solubility for a small selected group. But from the solubility data we have available to us with other drugs, there may be other drugs on the market now that could be reformulated so as to have a higher concentration per milliliter, and might be even superior to heroin.

We just do not know now. There needs to be a further examination of that issue, and certain studies might need to be performed. It is hard to say right now whether heroin would even be the superior drug for this small identified group of people who are wasted, highly tolerant to narcotic analgesics, and unable to take oral medication.

Mr. MADIGAN. You may be interested in knowing that I learned about heroin's greater solubility from the National Institutes of Health after I introduced this bill, and I understand that people from the National Cancer Institute also agree that heroin has that property, so I am somewhat taken aback that these two institutions would be saying that, but you would be quoting Dr. Beaver as being in disagreement.

Dr. NIGHTINGALE. No. I am not saying that.

There is a range of other commercially available drugs that are quite soluble and could be formulated in concentrations that would be even more potent per milliliter than heroin.

Certainly there are data which show that heroin is more soluble than morphine. I think that one should look at the whole range of drugs that are available commercially and some that are investigational, when considering solubility. I am not against heroin. I am not suggesting that it does not have that property of high solubility.

Through the table submitted with my prepared statement, I meant to represent the variability of the various commercially available products in terms of their relative potencies and in terms of the concentrations and solubilities that exist and can be obtained.

It is not a fully explored area. People like Dr. Beaver, I know, have actually gone to drug companies asking them if they would not consider reformulating to develop more potent preparations.

So I am not taking a particular position in terms of which drug is best at this point in time, or even where heroin stands ultimately in terms of its relative benefits.

Mr. MADIGAN. Mr. Haislip, you and I have had—I am afraid—too many occasions to agree to be in disagreement about things over too many years.

I would like to ask you if you think on the basis of your testimony that the original intent of Congress and their actions of some 50 years ago should be controlling today?

Mr. HAISLIP. Yes, sir, I do. Based upon the unique social experience we have had with heroin, we would run a considerable risk in its distribution.

The risk is worth running if there is a unique benefit to be derived from it. If there is not a unique benefit to be derived from it, and we can derive the same benefit from other drugs with greater emphasis by the practitioners on doing something for these people, and greater emphasis by the industry on providing the right dosage forms, then I think that is the preferable way to go.

I think the problem with heroin does not entirely reside in its pharmacology. It is not clear why it has become the drug of choice by such a large addict population, but that is the case, even if the explanation is essentially historical.

That is my personal feeling about it, truthfully.

Mr. MADIGAN. Earlier in the day Dr. Carter held up some news stories about the use of heroin being up in the District of Columbia and all across the United States. I think you rationalized the three different actions of Congress that you described as all having as their purpose or as their goal to limit the availability of heroin in the United States.

Mr. HAISLIP. Yes, sir.

Mr. MADIGAN. It would seem on the basis of what we know from reading the daily day publications that we have succeeded in limiting the availability of heroin to those people who might medically benefit from its use, but we haven't succeeded in limiting the availability of heroin to people on the street; is that a fair conclusion?

Mr. HANSLIP. No, sir, I don't think that that is entirely fair to what has been accomplished, but I need to give you a lengthier answer, if I may.

We have succeeded in the last several years of greatly reducing the availability of illicit heroin in the United States, principally because of the eradication efforts which we stimulated with the Mexican Government because of the work of the Turkish Government and the French Government and our own officers stationed overseas in eliminating the so-called French Connection.

At the present time heroin continues to be a problem, but it is far less of a problem than it was in the late 1960's and early 1970's.

In many communities heroin is probably not the major drug problem any more. There are exceptions to that; New York City, and perhaps some other parts of the eastern seaboard, which are being impacted by the heroin coming out of parts of Asia, particularly Pakistan, Iran, Afghanistan.

In spite of that rather severe and ominous threat, heroin is not the problem today that it was several years ago by a long measure.

It is still true that it is available in many cities and can be purchased, albeit in a highly diluted form. It is available in considerable quantity in some few cities such as New York, but I think we have made a considerable progress in that area and really the challenge that we now face with regard to heroin is maintaining that progress against the new threats that we see and further reducing it now.

But the thing is that if indeed it is of a special benefit to this class of patients, then—as I have indicated—I think all of us would take a different view.

I think what we are saying is that there is no evidence that it is. This seems to be in accordance with the research.

Mr. MADIGAN. Does a bill that would simply reclassify it for the purpose of making it available under very limited circumstances to a very limited number of people do anything more than give us the experience that would enable us to make that judgment?

Mr. HANSLIP. Well, it would be my opinion that the way to gain that experience—I think this is right—is through the kind of research that is being sponsored. Now, if we weren't doing that, if we were not making an effort, then I think that we would—it would be very difficult for us to say this, but that effort is being made.

It appears to be in the hands of very competent, dedicated researchers who are certainly concerned with the problem and who are taking an objective, dispassionate, scientific approach to it, which is what we all want.

We don't want it decided in the context of emotion which may lead to the wrong decisions that serve no one.

So I think for that reason that the right approach is being pursued. I think that this kind of exercise probably is long overdue, at least in terms of highlighting the importance of responding to this need, which has not previously been adequately recognized of treating people who are suffering in this fashion.

I think it is being responded to now.

Mr. MADIGAN. Mr. Chairman, I think I have thoroughly abused the 5-minute rule and I appreciate your patience and thank you very much.

Mr. WALGREN. Thank you, Mr. Madigan.

One very quick question for Dr. Nightingale. If the Food and Drug Administration approved an NDA application for heroin, would the—is it the Department—the Drug Enforcement Administration—be obligated under the Controlled Substances Act to remove heroin from control schedule I and place it in a less restrictive category?

Dr. NIGHTINGALE. I believe that they would, but I would be interested in the DEA's comments on that as well.

Mr. WALGREN. Very briefly, if the DEA would like to comment on that.

Mr. HANSLIP. The only additional comment I can offer to you is that it is clear that would congressional action, such an action would have no practical impact.

The law does ban the importation of opium for the manufacture of heroin. It also bans the importation of finished narcotics.

In other words, the only way we get—the only way we manufacture and make narcotic drugs available in this country is based upon nonsynthetic narcotics through the importation of crude opium for their manufacture.

That is in the law.

The law states that no crude opium will be imported for the purpose of manufacturing heroin.

I think that congressional action is required here when a decision is made that it is the right thing to do. I think congressional action is required.

Mr. WALGREN. Dr. Nightingale?

Dr. NIGHTINGALE. I would like to say that in the past whenever a drug has been presented as ready for marketing, and rescheduling requested, this has been accommodated by DEA. If they could not do it in this case, and legislative changes were needed, we certainly would expect that to be supported.

Perhaps I was too reticent earlier concerning what FDA does to try to promote the development of promising drugs.

We would work, within our power to see that a sponsor was found if heroin were indeed found to be a promising drug substance and commercial interest was lacking.

Mr. WALGREN. With that, on behalf of the committee, we thank you for your testimony. Thank you very much.

[The following letters were received for the record:]



HAIGHT-ASHBURY FREE MEDICAL CLINIC

MEDICAL SECTION
559 Clayton Street
Tel: 431-4714

DRUG DETOXIFICATION,
REHABILITATION AND
AFTER CARE PROJECT
529 Clayton Street
Tel: 621-3014, 621-3015
San Francisco, CA 94117

WOMEN'S NEEDS SECTION
1698 Haight Street
Tel: 621-1003

June 20, 1980

Honorable Edward Madigan, Representative
2457 Rayburn
House Building
Washington, D.C. 20515

Attention: Mr. Scott Wilburn

Dear Congressman Madigan:

It has come to my attention that a House Bill (HR733R), currently being reviewed by yourself as well as Congressmen Henry Waxman and Robert J. Twycross, is being considered which will permit the use of diacetylmorphine (Heroin) for the treatment of specific medical patients under very strict and controlled guidelines. As a medical professional who has worked directly with Heroin addicts over the past 10 years, I would like to share with you some of my initial impressions about HR733R.

Three important questions immediately come to mind with the proposal to initiate limited use of Heroin for the treatment of specific patients under a structured medical protocol. These are:

1. Is there an established need for the use of Heroin as a pain medication in select situations?
2. Is Heroin any different from the other currently available opioid analgesics?
3. What is the possibility that Heroin used for medical purposes will be diverted to the drug abusing subculture?

In regards to my first question, it is obvious from the introduction of HR733R that there is definitely a need for alternative analgesics in the management of the unfortunate patients experiencing severe and chronic pain. During the last decade, the medical society has seen the introduction of a growing number of innovative drugs and devices to deal with the management of pain not controllable by traditional means. Acupuncture, the Hospice-Brompton's Movement and Dymorphine are some examples of these recent innovations. The continued medical search for more effective pain control is indicative of the need to reevaluate the use of the proven and effective analgesic, Heroin, for use in specific patients.

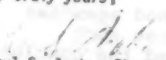
The second question has been a matter of academic controversy for a long time and is one of the reasons why Heroin has remained a schedule I Controlled Substance over the past several years. The stated argument is that Heroin is very rapidly converted to morphine by body enzymes. Thus, it is alleged that when one administers Heroin, he is actually observing the effects of morphine rather than Heroin. From my 9 years of working directly with Heroin addicts and my academic research at the University of California, I agree with Dr. E. Leong Way that there is a major difference in the subjective effects between Heroin and Morphine. Patients who have received both of these drugs attest to this fact while research conducted by Dr. Way indicate that Heroin, being more lipid soluble may indeed cross into the brain very rapidly and have a more pronounced effect at the opioid receptor sites than morphine. Though the conversion of Heroin to Morphine is very rapid in the body, there is still sufficient time for Heroin to produce its own characteristic effects.

The most important consideration with the proposed medical use of Heroin is the problem of its possible diversion to non-medical uses. It is painfully obvious that Heroin is a very powerful euphoria producing drug but legal censure of it has not stopped its widespread abuse. Other very potent opioid substances which are currently administered under strict medical protocol do not have the widespread abuse problem seen with Heroin. Methadone has undergone a major problem with diversion and misuse by the substance abusing subculture. It must be pointed out, however, that the widespread abuse of Methadone postdates its use for the treatment of heroin addiction. Any major opioid drug used in the heroin addict population will, in my opinion, find itself diverted to the substance abusing subculture. If Heroin was to be used only in select medical patients under very strict guidelines and protocols, I strongly feel that diversion will not be a major problem.

Described in the hereabove are my personal evaluations of the possible problems that may be encountered with the proposal to initiate the limited medical use of Heroin for the treatment of pain in specific patients (HR733R). These evaluations lead me to take the position that Heroin should indeed be investigated as a possible alternative to available drugs for the management of severe and chronic pain. This should be done under strict guidelines to insure that no diversion will occur and that Heroin will only be used for legitimate medical purposes.

Your interest and consideration of my evaluation in regards to HR733R is deeply appreciated.

Very truly yours,


Darryl S. Inaba, Pharm. D.
Assistant Clinical Professor
University of California-San Francisco.
Director of Operations,
Haight-Ashbury Free Medical Clinics!
Drug Detoxification, Rehabilitation and After Care Project,
San Francisco, California

THE WHITE HOUSE

WASHINGTON

September 12, 1980

Dear Mr. Chairman:

The Administration greatly appreciates your continuing interest in the issue of appropriate care for the terminally ill. Your September 4 hearing on the potential medical usefulness of heroin for the relief of severe pain was particularly welcome. While the National Cancer Institute, the Food and Drug Administration and the Drug Enforcement Administration testified at length on our policy regarding the use of Schedule I drugs, I would like to reiterate the Administration's position on making drugs such as heroin or THC available for therapeutic purposes.

In 1977 the White House contacted the Surgeon General, stating clearly that, to the fullest extent possible, the assessment of potential medical usefulness of Schedule I drugs should initially be regarded exclusively as a medical issue. Any decisions on making a drug available for medical practice should be based on an objective scientific evaluation of available data, without bias from historical precedent, the legal status of the drug, or public prejudice. After receiving this letter, the Department of Health, Education and Welfare set up the Interagency Committee on New Therapies for Pain and Discomfort, one subcommittee of which focused specifically on fostering research on and evaluation of Schedule I drugs. Our policy, then as now, was to ensure that all decisions in this area were based upon medical and scientific evaluations and not on any history of abuse of the concerned substances.

The Interagency Committee and the other concerned agencies have encouraged research on Schedule I substances such as marihuana, THC and heroin and have approached the conclusions flowing from that research in an unbiased manner. The recent decision by the Food and Drug Administration to approve wider use of THC capsules for experimental treatment of nausea and vomiting in cancer patients undergoing chemotherapy reflects this openness. Likewise, we will continue to encourage a full and fair assessment of the therapeutic usefulness of heroin for pain connected with terminal illness or other indications. Public policy should and will follow the scientific evidence. I can assure you that if this scientific evidence demonstrates

heroin to be particularly useful in managing pain when compared with drugs that are currently approved, we will actively encourage its availability under appropriate controls.

Hearings such as the one held last week highlight the need for wider dissemination of information on effective means of dealing with terminal illness and intractable pain. We look forward to continuing to work with you and the other members of the Subcommittee on Health and Environment to better inform the health community and the public on steps that can now be taken to alleviate suffering and to encourage needed research in this area.

Sincerely,


Lee I. Dogoloff
Associate Director
for Drug Policy
Domestic Policy Staff

The Honorable Henry A. Waxman
Chairman
Subcommittee on Health
and the Environment
Committee on Interstate
and Foreign Commerce
United States House of Representatives
Washington, D.C. 20515

[Whereupon, at 1:50 p.m., the subcommittee was adjourned.]

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